

# MANUFACTURERS' RECORD

A WEEKLY SOUTHERN INDUSTRIAL, RAILROAD AND FINANCIAL NEWSPAPER

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## Manufacturers' Record.

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BALTIMORE, MARCH 29, 1906.

J. W. Boardman, Jr., of the Cement Machinery Co., Jackson, Mich., writes to the MANUFACTURERS' RECORD:

We believe that your MANUFACTURERS' RECORD is unquestionably accomplishing a great work in the industrial development of the Southern States. Your many articles upon the continued industrial activity has a tendency to stimulate the investment of capital to the promotion and development of many Southern manufacturing enterprises. The results secured by us through your advertising columns have been entirely satisfactory, and as it is our intention to commence to actively and vigorously promote our trade interests in the South Atlantic States, we hope to again resume relations with you.

### THE EXPANDING SOUTH.

One signing himself "Yankee" writes to the New York Sun as follows:

From an article in the Sun under title "Twenty-five Years in the South," condensed from the MANUFACTURERS' RECORD, I note that in a quarter of a century the assessed value of property in the South has increased from about \$3,000,000,000 to \$6,500,000,000, or \$3,500,000,000 in 25 years—\$138,000,000 a year. This is getting rich at the rate of \$2,500,000 a week, or nearly \$360,000 a day, or \$15,000 an hour every hour of every day of the week for 25 years, no intermission for holidays or Sundays. This is not so bad, is it, for a section of our glorious land which 40 years ago was worse than bankrupt financially and was facing a social problem upsetting all the traditions of a people? Which shows what the truly American spirit can do when it loosens up and goes in to win. Hooray for Dixie and her dollars! She'll be an octopus by and by.

The increase in the assessed value of property in the South is really but one of the indications of its wonderful progress now under way. Its actual wealth is increasing at the rate of about \$3,000,000 a day, judging from the advance made in 1905, and the forms production takes and the lines upon which wealth increases are suggested in the \$1,808,000,000 worth of products sold from the farm in 1905, the like sum rep-

resenting the output of mining and manufacturing, and the increase in the past five years of bituminous coal mined a year from 49,048,059 tons to 70,600,000 tons, of pig-iron made from 2,604,671 tons to 3,100,000 tons, of petroleum produced from 17,000,000 barrels to 60,000,000 barrels, of spindles in cotton mills from 6,407,403 to 9,346,701 and of railroad mileage from 52,594 to 60,980. And the South has really just begun to develop. "Yankee" will be welcome to participate in the results.

Advertisements of Southern localities offering special advantages for the location of manufacturing enterprises will be found on pages 66, 67 and 68.

### ENGLISH SPINNERS' VISIT.

The visit to this country during the next six weeks or two months of representatives of English spinners to investigate many phases of the cotton situation ought to be productive of much good to everybody interested in the great staple. They were scheduled to sail for this country last week, and will arrive in Boston in time to make a thorough study of the mills of that section before participating, as some of them will do, in the eightieth meeting of the New England Cotton Manufacturers' Association, to be held at Boston April 25 and 26. A few days later they will be in Washington to attend the conference, May 1 and 2, of growers and manufacturers of cotton. The tentative program for that gathering, submitted by Mr. C. J. H. Woodbury, No. 45 Milk street, Boston, secretary of the New England Cotton Manufacturers' Association, and by Mr. C. B. Bryant, Charlotte, N. C., of the American Cotton Manufacturers' Association, includes the general topics, cotton production, handling of cotton, marketing cotton and statistics and speculation. Sub-features will be improved methods of cultivation, cost of production, possibilities of acreage and future yield, the world's consumption and needs, ginning, baling, tare, moisture, transportation, warehousing, stability of price, relations between growers and manufacturers, census bureau reports, agricultural department reports, uniform weight of bales, foreign statistics. It is hoped that the visitors may be present at the Asheville meeting of the American Cotton Manufacturers' Association May 16 and 17, and that they remain long enough in the United States to make a thorough study of Southern textile establishments, and especially of the great opportunities of Southern farms as the main supplier of cotton for the world. They are assured of a warm welcome wherever they may appear in the North and in the South.

John Murphy, Murphy's Hotel, Richmond, Va., in a letter to the MANUFACTURERS' RECORD, says:

I can assure you that I am satisfied that you are doing more to build up the South than any paper in the country.

## GOVERNOR WARFIELD'S LEVEL HEAD.

Citizens of Baltimore, especially the wage-earners among them, owe a debt of profound gratitude to Governor Edwin Warfield for his prompt and sensible veto last week of the Dawkins bill, which, had it become a law, could only have done irreparable damage to the city and the State. The promptness with which a not unexpected veto was sustained in the House of Delegates, where the unique bit of legislation originated, was enough in itself to stay the petulance at the fact of the limited class of individuals who alone of the several hundred thousand citizens of Baltimore had countenanced the bill, and to turn their minds into a channel of thought that would undoubtedly lead them to thank the governor for his gratuitous kindness to them. Instead of that they have discovered cowardice in his act. Such a discovery proves that they are inept in the use of the English language. If Governor Warfield had not done his duty he would have been a coward. If he had been swerved by a political bugaboo from a course of action dictated by judgment and reason and by a sincere purpose to do for all the people, he would have been a coward. Still, no one suspects that he is going to undertake to pose as a hero because of his veto. It took courage on his part, to be sure, to disapprove of the Dawkins bill, but only the courage required to display common sense in contrast with a too common display of hysterics. His common sense was condensed in the following paragraphs of his veto message:

We have many strong and sturdy young men in our midst, 18, 19 and 20 years of age, on whom feeble fathers and aged grandfathers (registered voters) or widowed mothers and their young children rely for support. These will be hurt, for, under this bill, they will not be allowed to labor on the public works of Baltimore city.

The State has an immigration bureau, whose object it is to encourage foreigners to settle in Maryland and help build up our State and city.

These are excluded by the bill. We invite them to come; but when they do come, with the declared intention of becoming permanent residents and citizens, we shut them out from all public work.

It hurts the laboring man from other States who comes to Maryland to settle down and become one of us, and it will hurt all the balance of the community.

The cost of the improvements, as calculated by competent authority, will be materially increased. Taxes will be increased, and the work will be greatly delayed, and, as a natural consequence, a damper will be thrown on all enthusiasm for further improvements.

The simple question, therefore, is, shall I approve a bill which promises a temporary advantage to a small class of the community, but which does harm to everybody else?

It seems to me that this statement of the question is its own answer.

Governor Warfield's allusion to the object of the State Immigration bureau suggests that within the remaining few days of the session of the legislature he may have opportunity to display more of his courage. While the State has an immigration bureau designed to attract the thrifty and industrious to the State,

it is wasting its money upon another bureau, that of industrial statistics, the practical tendency of which is to limit the opportunities of the thrifty and industrious. That bureau with unerring instinct is seeking to strengthen its power for ill under cover of the agitation for the prevention of "child labor," and behind the tender-hearted and generous men and women who, unacquainted with the evils that have followed "child-labor" legislation elsewhere, have been led to further the measure in this State, lurks as originator of the agitation the very element which was rampant for the Dawkins bill and which charges Governor Warfield with cowardice in vetoing it. No man with his heart in the right place can view with equanimity the spectacle of immature children toiling for their living. At the same time the attempt to better the condition of such children by legislation has been a failure and has had a most pernicious effect upon the morality of the class sought to be benefited. It has been a case of swapping the devil for a witch. But there is also another side to the question. Passage of ineffective legislation fixing the age under which no children may work at a point under which some children should not work, and, therefore, appealing strongly to human sensibilities, has systematically been made the pretext for employment of parasites who thrive upon emotional social agitation, for the advancement of socialistic propaganda and for advancing the non-working period to 18 years. It requires a certain amount of courage to face the misunderstanding and the misrepresentation bound to follow resistance of this movement on the part of individuals who have studied it from all sides, who are convinced of its menace to the rising generation and who recognize in its origin and motive power, now kept in the background, but ever ready to advance stealthily, as now in Maryland, Ohio and Kentucky, the same mistaken and narrow selfishness that inspired the Dawkins bill.

### GIVING MEN PAUSE.

Opportunity for the country to do some solid thinking in connection with the anti-railroad measures now before Congress has been given in two recent speeches, the one made by a railroad executive who is credited with being a close personal friend of the President and the other by a senator who has been his intimate political associate. Unwitting acknowledgment of the position and power of the United States Senate and of its proper place in the political economy of the American government was given when, with the approach of the time for that body to consider the Hepburn railroad-rate bill, a systematic campaign was begun through divers so-called popular periodicals assailing the character of individual senators and the integrity of their body in the aggregate. This was the most obvious attempt to create a mob-mind in assurance of the ultimate success of the Hepburn bill. That the Senate is, of course,

unappalled by such literature was clearly demonstrated in the gem of a speech by Senator Lodge of Massachusetts, who, from his place in the Senate, denounced the current assaults upon the institutions of the government and upon the conduct of our public and private affairs. He brushed aside as essentially immaterial slander and misrepresentation of individuals on the ground that a man must be of little worth who is not able by his character and his honesty to withstand such assaults. But he did resent sharply the assaults upon the courts of the country, which are, of course, in their nature barred against answer, and he said:

Now, Mr. President, there is a man of high character holding a high public position deliberately stating to the people of this country that the courts and other public bodies are owned by the railroads. He says they own them by electing them. United States judges are appointed. They are not elected. They are appointed by the President. That implication is that the President appointed men owned by the railroads.

If this were the utterance of some of our irresponsible magazine writers, whose only thought was to turn a penny by meeting what seemed a momentary demand for a sensational statement, it would be bad enough, but very far from fatal. Writers of that type come and go. They seize upon the excitement of the moment and presently rise like a flock of shore birds and whirl away to another spot where they think they can find a fresh feeding-ground. These modern imitators of Titus Oates will pass away as he passed away. They will bring no innocent heads to the block as he did, although they may here and there cause distress. They will not end in the pillory as he did, because the pillory has been abolished, but they will go out of fashion just as he did into silence and contempt.

It is when a man of ability and character, holding high government position like that of an interstate commerce commissioner, uses the language which I have quoted that the matter becomes deeply serious. It is when doubts and suspicions as to our courts are suggested by the words of men eminent in public office, as has been the case in the last months during the discussion of this question; it is when every effort is made to shut the courts out from all consideration of the momentous questions raised by this bill that the matter grows grave indeed, for it is in this way that the distrust is bred of which the senator from Texas spoke and which every reflecting man must believe to be an incalculable if not an irreparable injury to the country.

Upon similar lines the crux of the Hepburn measure is its essential assault upon the courts, however indirect. What may be regarded as its minor ills were set forth in the speech at Hartford, Conn., of President Charles S. Mellen of the New York, New Haven & Hartford Railway, a man cognizant of the evils outgrowing from the economic transformations of the past quarter of a century, but well-balanced enough to oppose quick remedies for the evils. Some paragraphs of the speech follow:

When I read a bill nominally prepared for such a purpose, and find there is little or nothing in it to do away with rebates and discriminations that existing laws may not accomplish successfully if enforced, but is mainly directed to securing authority to interfere in the handling or management of the carriers in other and different matters that appear to be of no public interest, and is being "hurrahed" through on the rebate and discrimination cry, is it to be wondered that I am disposed to hesitate, halt and consider to what port we are drifting and what may be the consequences?

The bill is so bad and is so full of such evil possibilities (regarding which I am disposed to believe some of its advocates have been imposed upon) it will probably overshoot the mark, and a careful examination causes me to speculate whether it may not have been cunningly devised by someone opposed to all legislation. So utterly subversive is it of all principles of justice, so utterly regardless is it of all warrant in constitutionality, so arbitrary and autocratic is it in its provisions regarding unimportant matters, that it may well be believed it was the design to cause disgust, distrust and antagonism among all right-thinking and fair-minded men.

If a square deal is more than a well-sound-

ing phrase, if the Senate of the United States was constituted as a safe and sane barrier against misguided and temporary popular clamor, the noise of numbers, the misdirected zeal of those who wish to divide with those who have that which they have not (the Socialists, the Anarchists, the mob), then such a measure as the Hepburn bill must fail to be radically amended before becoming law.

Those are the words of a man still hopeful for his country's institutions, unafraid of the mob-mind and undoubtedly estimating the Hepburn measure at its true worthlessness. He might have added that one of the greatest curses of the country today is lawmaking, that is, legislation by men more or less demagogic, designed to quiet a righteous grievance, expressing itself on wrong lines or to employ unthinking minds to utterly selfish ends. Lawlessness in high places and low is a direct result of contempt for law cultivated by legislation in defiance of the fundamental principles, of which legislation the Hepburn bill is the acme. What is needed is not more law, but the enforcement of the law as it stands; not a bluff at enforcement under the same demagogic impulse as that which meets the mob-hurrah with a new law, but the enforcement that will bring offenders of whatever stripe to the punishment they deserve. The call of the hour is for execution of the laws rather than the passing of laws.

Mr. J. F. Bacon of the Mead-Morrison Manufacturing Co., coal-handling machinery, Cambridge, Mass., writes to the MANUFACTURERS' RECORD:

We read with a great deal of interest the copies of your *Daily Bulletin* and have received several inquiries through your columns.

#### NORVAL E. FOARD.

Death ended rather suddenly last Monday one of the most notable careers in the history of American journalism, that of Norval E. Foard of *The Sun* of Baltimore. He was only 69 years old, but for about 50 years he had been in active newspaper work, interrupted only by service for the Southern Confederacy, and for 41 years he had been a member of the staff of *The Sun*. In that capacity and associated with men singularly devoted to the welfare of the paper he was eminent for his enthusiasm, his energy, his painstaking zeal and his eye single to the interests of *The Sun*. Proficient in many lines, capable of holding down any desk in the office in an emergency, and of making his training tell effectively as a general or special correspondent, he had in latter years been largely concerned with matters relating to the State of Maryland. Work at Washington and as the head for a number of years of a bureau at the State capital during legislative sessions had given him an extensive acquaintance with men of affairs and a thorough insight into events of moment. His long labors, too, had given him a vast fund of information about people and things which was of incalculable value to him as his work took permanent form in *The Sun Almanac*, which he really created as an indispensable annual handbook for immediate use during each of the past 30 years by men in many walks of life and as an authoritative record of events in Maryland and nearby States of the South. It was authoritative because Mr. Foard was strenuous for accuracy and reliability in all that he did, and the same characteristics appear in the little volume written by him two or three years ago, "Maryland as It Is." His wonderful vigor remained with him until his last brief illness.

#### A CORRECTION.

Through inadvertence the MANUFACTURERS' RECORD published last week an incorrect announcement of the name of the

treasurer of the Southern Supply and Machinery Dealers' Association. The gentleman who was elected to that office at the St. Louis meeting of the association is Mr. Alvin M. Smith of the Smith-Courtney Company, supplies and machinery, Richmond, Va.

#### SOUTHERN FARM MAGAZINE.

On the verge of another planting season the *Southern Farm Magazine*, in its April issue, urges the farmers of the South to maintain and to strengthen the business policy which has enabled them during the past year to handle their crop so advantageously. At the beginning of the cotton year influences are always brought to bear to induce the growers to work against their own interests. The gratifying experience of the past year, however, has showed the farmers what they can do, and in the knowledge of their own strength they are better equipped than ever before to persist in the policy determined under the auspices of the Southern Cotton Association. In the same issue of the *Magazine* is some reference to the growing inclination of Southern farmers to adapt their operations to meet the necessities created by a growing scarcity of negroes as farm laborers, and the suggestion is made that this adaptation is bound to accelerate the movement to the South of the farming class, which has been accustomed in other parts of the country to depend upon itself for labor. Progress of the immigration movement to the South is noted in the case especially of the Carolinas, Georgia, Louisiana and Texas. Practical information about poultry, live-stock, dairying, cottonseed products and the divers farm operations for the month is given, and in the several regular departments of the *Magazine* are discussions of live topics of current interest in many fields.

The *Southern Farm Magazine* is published monthly by the Manufacturers' Record Publishing Co., Baltimore, Md. Price \$1 a year.

#### CIVICS AT TUSKEGEE.

THE MANUFACTURERS' RECORD has received a copy of a volume containing a study of the negro question in the United States, with a suggestion from its author that, "coming from an English woman, it may be of interest" to our readers.\* We hardly believe, judging from the mental attitude revealed by the author's description of her sensations in partaking, as "the only representative present of a proud imperial race," of breakfast and other social diversions with the family of Booker Washington at Tuskegee, where she was the volunteer guest, that any view she may have upon the negro question anywhere can be of real value to the negroes, and may hardly interest our readers, except as they reflect facts about the negro which otherwise might not be available. The average white person in dealing with negroes is usually facing a mask. But with one's legs under a negro's family mahogany one may get behind the mask. Such seems to have been the case with the author of this book.

Individuals friendly disposed in the past toward Tuskegee, because they were not thoroughly acquainted with the full scope of its work, have noted with regret the cultivation under Ogdene auspices in New York, in the interests of Tuskegee, of notions about the relations of whites and negroes that can be only detrimental to the latter. That cultivation of sentimentality about social equality of the races is, of course, not announced in the curriculum of Tuskegee. Nor is the course of study which this English woman seems

to have been let into so announced. She writes:

"When the news of Theodore Roosevelt's re-election to the Presidency of the United States was announced, I, an English woman, the only representative of the Caucasian race, sat in the crowded Memorial Institute Chapel of Tuskegee, Alabama, belonging to the famous educational settlement for colored folk, of which Booker Washington is the founder and principal, as the guest of the negro people. Exactly opposite on the platform sat this celebrated man, whose life-story from slavery to high social and academical distinction is known world-wide. Around him, looking down on the dark, eager upturned faces of expectant young men and women, were gathered together the majority of his large staff of instructors, ladies and gentlemen of refined manners, of education and culture. A secretary stood beside him reading out the telegrams giving the latest returns at the polling centers from various cities and States as fast as they were handed to him. The excitement of an excitable race is a thing to have witnessed, held in check as it was by the presence of their principal, but as time passed on, and the clappings of 1500 pairs of black hands announced emphatic approval of the swelling Republican vote, it rose to an almost uncontrollable pitch, and snatches of songs burst from the youths when any interval occurred between reading out these telegrams, eliciting a grim smile from the otherwise motionless figure in the chair. Some 1500 students, with perhaps 100 teachers and outsiders, brought up the assemblage to nearly 2000 people. The orderly, well-dressed, intelligent faces of these students, who are picked specimens of the race—for no young man or young woman without determination, physical strength and intelligence could endure the hard curriculum of the school routine—impressed me with the fact that they had grit, fine qualities of head and heart, needing only the magnetic influence of faith in the potentiality of their leader to wake them from the sensuous, lethargic spell of Africa.

"Anxiety, keen expectancy were written on their features, and no wonder; for the black associates all the privileges he has ever received from the Republican party; to him democracy and oppression are one and the same thing. Herein lies one of the complexities of the problem. In its unqualified vote for democracy 'the solid South,' as we have seen, records its undying antagonism to a party which forced upon it the humiliation of negro domination; today, when justice is successfully combatting passion and prejudice, and the white man of the South contributes taxes to the education of the negro and meets him, outside the sphere of politics, in commerce in a fairly friendly way, he asks why should the Southern colored folk vote against Southern interests?

"If an angel came down from heaven we should not vote for him if he were Republican," was said to me by an important citizen of New Orleans.

"On this occasion many democratic voters rather admired Roosevelt's personal character, Parker, his opponent, being practically unknown to them; but they were loyal to their party.

"At length the noise became furious, especially when returns were read from cities considered doubtful showing the enormous popularity of the Republican candidate. Shortly after Dr. Washington rose from his chair and read the defeated Democrat's letter congratulating his opponent on his victory, the country having shown unmistakably its continued confidence in his leadership. Prolonged cheering relieved the tension of the preceding hours. That night there was no marching out to the sound of the band, no sing-

\*Ethiopia in Exile. By B. Pullen-Burry. Publisher, T. Fisher Unwin, London. Price six shillings.



ing of negro songs and melodies; the girls first, in charge of their teachers, trooped out, then the youths passed in front of me into the starlight night with radiant, joy-lit faces, for their cause had won. Outside the building, as they dispersed to their different dormitories, I expressed my surprise that they went off with so little noise, thinking how British lads under similar conditions would render night hideous with their yells and shouts. But the teachers escorting me to my quarters told me that instinctively the lads would repress any exhibition of feeling. Down below the hill, they said, the whites in the little town of Tuskegee would be feeling very sore at the overwhelming triumph of their political opponents and would be in no humor to hear the colored people rejoicing. Dr. Washington, they said, always enjoined upon them to forego offering the smallest irritation to the white people in the neighborhood.

"I can scarcely explain my own feelings as I partially realized what it must be to live, an alien and hated race, in a strange land; it was wisdom, learnt in a school of persecution, to train these young people to walk warily, to refrain from the expression of heartfelt joy which might awaken the latent enmity of the dominating race. I had not personally come in contact with race prejudice to any extent, but a few days at Tuskegee convinced me it is no myth or fancy. \* \* \* A British subject at this institution told me that many of the colored people of the South go about in daily dread of being lynched. After learning for what slight causes negroes have been burnt at the stake, I was not surprised that this should be so. Picture such a state of things amongst the peasantry of any country in Europe! Russia even, unprogressive as she is, has not its parallel.

"So far as my personal observation goes, it seems to me that efforts to civilize some of the degenerate white people of the Southern States might well be undertaken in the cause of humanity and justice."

It may be suggested that such instruction, which may be called the course in civics, as thus reflected, is likely to be as detrimental to the negroes as is the course in social equality taught from New York.

Fool friends of Tuskegee seem to increase with the increase of its endowment.

#### FOR AGRICULTURAL EDUCATION.

Farmers' organizations of Texas are active in a movement to incorporate in the public-school system of the State a species of industrial education through the medium of lectures in the schools by intelligent farmers and others who have succeeded in special lines of industrial effort. It is claimed that wherever this plan has been tried in town or country it has proved a success not only in impressing practical ideas upon the pupils, but also in developing the latent capabilities of the lecturers.

#### THE COTTON MOVEMENT.

In his report for March 23 Col. Henry G. Hester, secretary of the New Orleans Cotton Exchange, shows that the amount of cotton brought into sight during 204 days of the present season was 9,171,516 bales, a decrease under the same period last year of 1,175,150 bales; the exports were 4,971,538 bales, a decrease of 1,188,946 bales; the takings were, by Northern spinners, 1,843,741 bales, an increase of 181,282; by Southern spinners, 1,497,174 bales, an increase of 37,491 bales.

According to a report from Lexington, Ky., automobile lines are to be established between Lexington and Richmond and Lexington and Nicholasville by Thomas Powers of Maysville, Ky., who operates a line of automobiles between Maysville and Flemingsburg, Ky.

## AMERICAN INTERESTS AND CUBA.

[Special Correspondence Manufacturers' Record.]

Havana, Cuba, March 22.

Indicative of the cordial feeling of Cubans for the United States, and of the many activities in the island in which citizens of our country are more or less interested, are some conversations I have had with representative men. President Palma of the republic is one of them. I met President Palma a few years ago, when, as president of the Cuban Junta in New York city, he was working day and night for the regeneration of Cuba. He shows a material physical change, the tremendous mental strain under which he has been for years now beginning to tell. He received me cordially.

"Cuba," said he, "is in a very prosperous condition as compared with a few years ago. We are advancing steadily. But we have only commenced. Our progress will be more marked by a closer commercial union with the United States. We have in Cuba wonderful opportunities in every conceivable line of human endeavor. Personally, I am deeply solicitous that these conditions be made manifest to the enterprising citizens of the United States. I have lived, as you know, a number of years in New York, and know something about trade publications. I have carefully examined your magnificent paper, the MANUFACTURERS' RECORD, and believe the steps you are taking in bringing about a closer alliance of commercial and professional interests between my country and yours through your powerful publication will prove of permanent benefit to Cuba, increasing in importance as time proceeds. Money is plentiful in Cuba; we have already paid \$18,000,000 to the soldiers of the revolution, and there is a surplus of many millions of dollars at this time in the treasury. We want more railroads, factories and industries of all kinds in Cuba, and to me it is a source of gratification that the MANUFACTURERS' RECORD has recognized this and intends to use its great influence to that end."

Cuba may be likened to a great magnet. That is my impression of the island after a few days' stay here. American tourists, investors and homeseekers are being attracted hither as never before. The island is fast becoming Americanized, and within the next few generations the English language will be in as general use as in an American city. The national educational system makes the study of the English language obligatory in the common schools. Every educated Cuban one meets in Havana speaks English. He sends his sons to American universities to study the language and to American mercantile houses to obtain a practical acquaintance with American business men.

Havana, the capital city, has many singularly attractive features. Its water-supply system handles the output of 400 springs purified by natural filtration, and its pumping apparatus is of the most modern character. Its citizens, though many of them, as in all large cities, are poor, are sober, and cleanliness ranks high among them. In this respect they are decidedly in advance of the Mexicans. Wages are high and the death-rate is low, the latter primarily due to the surprising cleanliness of the streets and alleyways. Many visitors are here from every State in the Union, with New York in the lead. Not a few have come to Cuba for a mere visit but have become permanent settlers. Millions of dollars of real estate in Havana province alone has passed into the hands of Americans. Havana as the commercial, business and social center of Cuba is developing and growing in wealth just as some of our great Western cities were 30 or 40 years ago. The long-drawn-out

struggle of the Cubans to free themselves from Spanish bondage, the devastating war, the incidents of reconstruction, all have passed, and Cuba today, having emerged from chaos, stands, with an air of genuine prosperity on every hand, smilingly inviting us to aid her in the development of her wonderful resources. Knit by the bonds of an enduring friendship, warmed into life by our exertions for Cuban freedom, her invitation is being accepted and American interests are found represented in every part of the island. There are about 1600 miles of railroad in Cuba, British, Spanish, American and Cuban capital being the working factor, the first named predominating heavily. The Cuba Railroad, the United Railways and the Cuban Central Railway, together with the electric railway systems, are extending their lines. Electric-lighting and power plants and water-works systems are being eagerly sought for by Cuban municipalities. The increase in sugar-cane production and of sugar manufacturing, necessitating the installation of new grinding and refining plants, is a notable feature of industrial development, while fruit and vegetable growers look upon the extension of the Florida East Coast Railway to Key West, only 90 miles from Havana, as the means of increasing their business dealings with interior points in the United States. Mining, either for coal, for iron or for the more valuable minerals, appears to be uninviting in Cuba. Fuel is scarce, and for manufacturing and other purposes coal is imported. Timber in certain portions of the island is still plentiful, but the long-leaf pine, the resin producer so well known in the Southern States, is conspicuous by its absence.

The Cubans, being progressive, are learning things. They have gotten hold of the reins now, for the first time, and just as soon as they have discovered, as the Mexicans have discovered, that it is a very expensive thing to entrust the practical management and operation of an electric railroad or lighting system to the entire judgment of their countrymen, regardless of Spanish capitalists controlling, they will have advanced a few steps farther. I saw in Havana a fine American electrical outfit operated by inefficient natives to the exclusion of foreigners, with the result that breakdowns were frequent and the neglected machinery was rapidly getting into bad shape.

Frank Steinhart, American consul at Havana, referring to railroads in the island, said to me:

"Very considerable development in various work is now proceeding. The Cuba Central Railroad, running from Santa Clara to Santiago, has opened up a section of the most fertile virgin lands in Cuba. Here great opportunities are present with regard to the cultivation of fruits, tropical products of every variety, as well as rich grazing lands. The Havana Central Railroad and the Havana Electric Railroad are rapidly opening up the interior of the provinces of Havana and Pinar del Rio, thus facilitating the shipments of fruits and vegetables from the interior to Havana for shipment to the United States. All the railroads, without exception, vie with each other in the progress of roadbed improvements, rolling stock and the purchase of railroad necessities generally. In the furnishing of the supplies needed it must be observed that American houses are very frequently beaten in competition, England or Germany coming in first. Broadly speaking, there is an era of improvement and expansion now on in Cuba, necessitating tremendous

purchases of material of every character. The country is prospering. Cuba is now, however, a country where the American workman may hope to flourish. It is the capitalist, investor or trader who succeeds here. Quite an influx of immigrants, comparatively speaking, are now arriving in Cuba, a large proportion of whom are natives of the Canary Islands and Spain."

C. L. Michod, general manager of the Interstate Electric Co., Havana, Cuba, referring to electric and railroad developments, said:

"The Havana Electric Railroad Co.'s interests are now occupied in constructing a number of suburban lines, one to Guanabacoa, another to Guimenes. The route to latter city, which has a population of 25,000 inhabitants, runs through two small chains of mountains, taking in the beautiful Treyano valley en route. Many important American interests are centered in this location. The machinery and material for these undertakings have been in the main contracted for, the General Electric Co. of Schenectady, N. Y., having secured the business.

"The Havana Electric Railway Co. is now contemplating the extension of its system to the city of Cienfuegos. Puerto Principe has decided to have an electric railway at as early a date as practicable. This particular Cuban city is headquarters for American investors and those identified with farming interests; it is becoming Americanized rapidly. The surrounding farming country has already been practically bought up by Americans. There is also considerable timber land in this vicinity, and saw-mills, while already there to a limited extent, will be needed in greater numbers as the land is cleared for cultivation. These, briefly, are a few of the enterprises now under way, but there are many more which will involve the purchase of immense quantities of machinery, not to speak of construction work, wharves, heavy masonry or sea-walls, custom-house, warehouses and depot buildings planned by the Havana Electric Railway Co. for this city and at other ports and interior points throughout the island. Many millions of dollars will be expended in these undertakings. Imports are exceeding in volume largely those of previous years, and, referring to machinery, such as sugar mills, electric equipments for illumination and power, saw-mill outfits and water-works apparatus, I regret to see that the United States is away behind. Germany is in the lead in these respects, and if we are to secure our share of this business, as we should do, American houses should send men to secure the business who are practically as well as theoretically the equal of the German representatives. This, of course, includes a thorough knowledge of the Spanish language, otherwise American houses are placed at a disadvantage of such a serious nature that they need not expect to be successful in competition to any extent."

One American firm alone, Snare & Triest, has already done much work here, and is doing more. For the United Railways of Havana it is building a steel and concrete pier. This pier will be in the main 420 feet in length and 51 feet wide, and connected with wharf of similar construction 180 feet, or making a total length of 600 feet. It will have three railroad tracks and two crane tracks; wooden wharf of native hardwood piling and floor about 725 feet in length. The same firm is building from Marianao to Hoyo, Col., 13 miles of railroad extension with bridge and trestle-work, an important branch of the United Railways, and the work is ordinary railroad construction, and a large force of men and teams, steam shovel and rock drills are now being employed on this work. It has just completed a large pier

of concrete and steel 750 feet long for the Cuban Central Railways in this harbor, at which ocean steamers can be loaded and unloaded directly without the use of lighters and will save a great deal of time thereby. There are three railroad tracks on the pier connecting with the main line of the Cuban Central Railways and two crane tracks for unloading purposes. The firm expects very soon to commence the construction of another steel pier in this harbor for private parties for direct shipment of sugar.

At Santiago the firm has now under construction water-works for the city under contract with the government of Cuba, comprising a large reservoir with concrete and earth dam some 600 feet long and 60 feet high, situated about four miles from Santiago, and the pipe line, distributing reservoir, standpipe, etc., to supply the city with abundance of good water. Other contracts completed by this firm in the past few years comprise the new pier and railroad at Matanzas for the government of Cuba, new bridge at Sagua la Grande, roads and bridges in several of the provinces for the government, the new electric power-house at Vedado near Havana, new piers at Guantanamo for the United States government and others of a similar nature for private parties throughout the island.

Mr. W. M. Anderson, manager of James B. Clow & Sons of Chicago, New York and Havana, said:

"Since the day of the surrender of Cuba conditions have been improving in all lines of industry, the American intervention having done great work in starting Cuba on the road to prosperity and welfare, and with the evacuation of the Americans the work was earnestly taken up by the Cuban officials, and the administration of the Cuban affairs under the direction of the Cuban officials has been such that any government might be proud of. Today I consider the general conditions of this republic most promising and encouraging, being without question one of the most prosperous republics of the world, and I feel quite safe in saying that capitalists can find no better place for investments than in Cuba.

"I have recently returned from a three weeks' business trip covering the island from Havana to Guantanamo, visiting most all the towns of any importance and principal sugar mills, and I find everywhere most flattering signs of prosperity. The sugar mills are all in the midst of the grinding season, most all of them running day and night. Nearly all the mills are from four to six weeks late in their starting this season, on account of the unusual late heavy rains for the season of the year; however, since February 1 the weather has been perfect, and hundreds of tons of sugar are being produced daily. The season's crop of sugar-cane is generally of good quality, though in some parts of the island the planters report the cane to contain too much water, but the production is fairly good. Several new sugar mills are now under construction in different parts of the island, and one of the largest and most modern mills to begin grinding this season is the 'Jatibonico,' located at Jatibonico, midway between Santa Clara and Ciego de Avila, on the line of the Cuba Company Railroad, and is owned by Sir William Van Horne and his associates. I had the opportunity to visit the manager, Mr. Wilfred Skaife, of the Jatibonico estate, in June of last year, and at that time Mr. Skaife had about 1000 men clearing the land and planting the cane, and the engineers were putting in the foundation for the machinery and getting ready for the steel structure for the building. During the year I visited the estate some two or three times, and

it was astonishing to see the rapid progress in getting the immense plant ready for the grinding season of this year. I was again on the estate February 18, and was surprised to find the mill in full operation and turning out more than 1000 bags of sugar per day. The plant is fully equipped with the most modern types of American and French machinery. It has a modern electric-light plant and an ice plant sufficiently large for a small city. The mill complete as it stands today cost a little over \$1,000,000, and it is a true demonstration of how quickly investments in the sugar industry can be put in actual production.

"The Nipe Bay Company at Nipe, Cuba, an organization of the United Fruit Co. and Mr. Hugh Kelly of New York, and under the direction of Mr. Joseph Rigney, is building the largest sugar mill in the world. They now have about 3500 men on the estate clearing the land, building railroads and putting in the foundations for the mills. Mr. Rigney tells me he will have the plant ready for operation by January 15, 1907. I find vast improvements and modern machinery has been installed in many of the old mills last year, and they are better equipped to turn out their product this year than ever before. The planters in Cuba are now in position to produce sugar as cheap as in any part of the world."

The firm represented by Mr. Anderson was early in the field at Havana, and did an extensive business during the time of American intervention in sanitary equipment of government buildings. The sanitation of the island is a matter of history, and now not only public buildings, but also hundreds of private residences in the island are equipped with the latest and best sanitary fixtures in the market.

H. M. Binckley of the firm of H. M. Binckley & Co., civil engineers and contractors, who is also a surveyor, said:

"The work of developing the resources of this island, the magnitude of its scope, covering all lines, is really little understood in the United States. Conditions here are shaping themselves as in California 35 years ago. In my opinion, the time is not remote when English will be the prevailing tongue in Cuba. It is obligatory in the national schools of Cuba for the youth of both sexes to study and perfect themselves in the English language. You will observe all the important business men on the island, referring to Cubans, speak English. Government officers, with few exceptions, whether in administrative or public works divisions of the service, speak English fluently. Their sons are sent to the United States to perfect their education in English, and when we consider the rapid Americanizing of Cuba now going on, the influx of investors and settlers from the United States, it is reasonable to expect that within a few more decades the English language will prevail in Cuba.

"There is a tremendous demand for railroad equipment; for instance, the Baldwin Locomotive Works of Philadelphia have actually on hand more orders from Cuba than they can possibly fill in two years, and there is a big demand for sugar-making and various other forms of machinery. Petroleum has been discovered in Santa Clara and Matanzas provinces, together with asphalt of both liquid and solid varieties.

"As an indication of the importance of American interests in Cuba will say, taking the American Club of Havana, with its 240 members, they represent an ownership of over \$100,000,000, and it may be opportune at this time to say that the man whose ability, business sagacity and untiring energy has done most to bring about the present healthy trade conditions,

not only in Havana, but also throughout the island, is the president of the American Club, Edmund G. Vaughan, and who is also president of the National Bank of Cuba. We are in need of more such gentlemen as Mr. Vaughan.

"Among the possibilities which occur to me at the moment with regard to manufacturing in Cuba is the use of heniquen. This fibrous material grows in abundant profusion wild throughout the island. It has actually been untouched for manufacturing purposes so far. Yet Mexico is deriving a very considerable revenue by manufacturing rope and bagging from the same substance, and which is hardly of as good quality as the Cuban product. This form of vegetable substance flourishes on land which is incapable of producing anything else. However poor the soil may be in Cuba, it will produce heniquen largely.

"Regarding pine of the long-leaf, naval-stores product variety, there is very little on the island. On the Isle of Pines, however, it is found to some extent."

R. E. Cobb, general manager of the Guarantee Trust Co. of Atlanta, Ga., branch in Havana, Cuba, is optimistic in his views of Cuba with regard to present and prospective trade conditions.

"American land purchasers," said Mr. Cobb, "are buying up the island. Great tracts are passing into the ownership of Americans in every Cuban province. I know of no country where the prospect of good returns on investments can compare with Cuba, referring to lands particularly. With regard to manufacturing in Havana, our firm, the Sibourney Company, makes daily 7,000,000 cigarettes, and in Havana a total of 14,000,000 are made daily."

Mr. Edmund G. Vaughan, president of the National Bank of Cuba, in reply to the questions as to the facility of ascertaining credits and making collections in Cuba on the part of merchants residing in the United States, stated in substance as follows:

"The National Bank of Cuba has a complete credit organization throughout the republic. In addition to its head office at Havana and a branch in the upper part of the city, it has 11 branches covering the island to which all the commercial territory is tributary. There is on record the history and credit standing of every business man and company, or if not it can be easily secured in a very short time. This information is quite as definite and satisfactory as that to be obtained in any city or State of America.

"In regard to collections from the United States, they are taken care of in exactly the same way as they would be if sent to a national bank in the States. They may be sent with or without shipping documents or may be in time drafts, which are immediately presented for acceptance and for collection at their due date. Shipping documents may be attached and delivered on acceptance or upon payment. However, inasmuch as the goods must remain in the custom-house until the documents are delivered, this latter is not advisable in cases of drafts over a few days' sight. Collections may be sent to Havana and distributed, or better still, sent direct to the branch covering the territory in which the collection is to be made, thus saving one link in the chain and enabling immediate returns. Remittances from collections are made in exchange on New York or other principal centers of the United States.

"The volume of these collections is, of course, growing. The report from the collection department on my desk indicates that collections in Havana alone for this day are at the rate of \$4,000,000 per month. Inasmuch as the business is developing in this way in the branches, the collections there are in proportion. Of

course, these collections do not all come from the States, but from all over the world."

Mr. Vaughan was asked in regard to the banking laws, especially concerning any inspection by independent examiners, and he replied that there was no provision in the banking laws and that the other banks did not submit to outside examination, but that the National Bank of Cuba had supplemented this by the employment of well-known, responsible and independent certified public accountants to make an annual examination of the books and assets.

Here in Cuba, where salad oils are on every table, American refined cotton oil is unknown. Latin races, as is well known, have a strong leaning for table oils, and to meet this tendency salad oils are imported from France and Spain in considerable quantities. The Cuban has long ago learned that there is no place from which he can obtain his flour for bread-making and coal for fuel as the United States. These goods in past times came from across the Atlantic, but as mining and manufacturing developed in the United States it was made manifest to the Cuban consumer that for quality and cheapness of such goods no other nation could compare with the United States. It would appear that these same conditions with regard to cotton oil should hold good in trade relations between the United States and Cuba. The Cubans are passing through a transitory or educational period of their national existence. They are susceptible of profiting to the fullest extent in their relations with the United States. Briefly, it is up to the cotton-oil interests of the Southern States to educate the Cuban to the value of refined cotton oil as a table oil and thus secure the trade which awaits them at their door portals. There is a field in Cuba for development in the matter of soap-making with cotton oil as a base material.

But if American machinery, including water-works systems, turbines, pumping apparatus, sugar-making plants, electrical equipment and railroad supplies, locomotives and rolling stock to an important extent, is not to lose out in the race with England and Germany for furnishing requirements in these lines in Cuba, Americans must bestir themselves. It is conceded that American machinery in the foregoing lines, with regard to make and general adaptability for the intended purposes, in most cases rank the highest. Not infrequently their prices are lowest in a competitive struggle to secure an important contract, yet the Teuton invariably wins the prize. One will naturally exclaim, why is this? Here a new-born republic, determined upon developing its latent resources in field and factory, purchasing largely and liberally of everything in the nature of mechanical contrivances constructed to that end, the economical expansion of its material interests, passes us by and purchases its requirements across the Atlantic, notwithstanding the advantages of contiguity, excellence and cheapness of material which the United States offers.

The chief of the system of public works of Havana informed me of a large contract secured by a German firm a week or two ago, the sum amounting to, I think, \$75,000, although the bids tendered by two American houses of national reputation with regard to workmanship and excellence of machinery were actually lower. I have heard similar statements with regard to sugar-making machinery and railroad locomotives and rolling stock.

One of the reasons given me why these happenings are common is the fact that German houses at all times stand ready to give a higher percentage guarantee of



efficiency of their machinery than the average American house. Another is that European firms give extended credit, ranging from three to nine months, while the American house demands cash on delivery of the goods, the most liberal concession being 60 days' credit, and that only in exceptional cases. These methods have doubtless something to do with the decision of the purchasers. But a careful study of the situation has caused me to believe there are other and more weighty reasons why Americans lose out so often in the effort to secure Cuban business.

In the first place, it is well to remember that Spanish capital controls most of the commercial interests of Cuba. On even terms the Spaniard will give the prize to a German as against an American, and will even stretch a point in going a little further to humor his sentiment of veiled hostility toward the American. The Spaniard has a keen scent for business, but in this case he permits feeling to interfere with his pocket.

The secret of the success of German houses in obtaining business not only in Cuba, but in all Spanish-American countries, consists in their sending out thoroughly-trained men in pursuit of it. The representative of a German house sent across the Atlantic is not only a thorough German scholar, but is also a perfect master of the Spanish language. If his line be machinery, he is also a mechanical engineer whose training and experience in schools of technology render him familiar with the difficult and intricate parts of his profession. Studying the character of his Cuban or Spanish prospective customer, he dwells at length on the merits of his goods in the latter's native tongue. Every question is graciously answered and every seeming mystery carefully and patiently explained. Furthermore, the services of trained German expert mechanics are guaranteed in setting up and operating important and costly plants.

This is the German method of securing business. Take the American drummer, the average salesman sent to Spanish-American countries. If he does happen to know a little Spanish it is of a nature at which the grave Spaniard or Cuban, who deem it rudeness to laugh at the lingual mistakes of a foreigner, has difficulty in repressing a smile. Our average American drummer may be all right to drive a bargain in New York or Chicago, and, in competition with brother drummers under normal conditions, to win out. But the same class of man should not be pitted against the polished and practical German in Spanish-American countries, for the reason that the latter is trained to the minute. He combines in himself theory, practice and a masterful knowledge of the language of the country, which, in turn, gives him a masterful control of the situation to the decided disadvantage of the American.

JOHN BANNON.

#### Architects' Plans Wanted.

In the course of a communication to the MANUFACTURERS' RECORD regarding town-site improvements to be undertaken near Macon, Ga., the Southern Land & Improvement Co. of that city states that it wants architects' plans for various buildings to be erected. For full information write the president, C. S. Woods.

#### Southern Architect Wants Draftsman

One of the leading architects of Florida is in need of the services of a competent draftsman, and is prepared to correspond with anyone prepared to apply for the position. The architect referred to is W. B. Camp of Jacksonville, Fla.

Assessed valuations of property in Macon, Ga., are \$18,483,751, an increase over 1905 of \$675,610.

## CEMENT POSSIBILITIES OF THE SOUTH—III.

By EDWIN C. ECKEL of the United States Geological Survey.

[Written for the Manufacturers' Record.]

Previous articles of this series have considered the general financial conditions which are connected with the possibilities of Portland cement manufacture in the Southern States, after which the cement resources of the States of Mississippi, Alabama, Georgia, Florida and South Carolina were described in some detail. In the present article the more northerly States will be taken up—from Tennessee and North Carolina to Maryland.

#### Tennessee.

In middle Tennessee limestones suitable for use in Portland cement manufacture outcrop over large areas, the more promising points for careful examination being probably along the Tennessee river and at or near Lebanon, Carthage, Murphreesboro, Shelbyville, Franklin, Nashville and McMinnville. It is probable, however, that cement development in this part of the State will not take place so early as in East Tennessee, where the commercial factors are perhaps in better condition.

In the valley of East Tennessee, and along the eastern edge of the Cumberland Plateau, pure non-magnesian limestones are found at many points close to transportation routes. The Trenton or Chickamauga limestone occurs in a number of north-and-south trending belts in the valley itself, while the Bangor or subcarboniferous limestone borders the east flank of the coal plateaus.

So far no attempt has been made to manufacture Portland cement in Tennessee, but it is probable that within a year at least one plant will be in course of construction. This prospective plant will be in the Cumberland Gap district, on the Tennessee side of the line, and will utilize the subcarboniferous limestones and shales which at this point make a particularly prominent showing. The American Association, which owns a large coal acreage in the Middlesboro district, is interested in the project, and its manager, Mr. J. H. Bartlett, has recently taken steps to actively push the flotation of a new cement company. The great strength of such a company would be in its close association with the coal-owning corporation. This would guarantee a steady supply of cheap coal, and the location of the plant on two railroads (Louisville & Nashville and Southern) would give it access to most cement markets.

#### North Carolina.

The conditions as to cement possibilities in North Carolina are exactly similar to those which are present in South Carolina. Good raw materials occur at various points in the State, but fuel is everywhere expensive, and the local markets for cement are not good.

In Western North Carolina a number of deposits of crystalline limestone are found. Many of these limestones are sufficiently low in magnesia to be usable as cement materials, while clays for mixing could usually be obtained nearby. Along and near the coast soft limestones—the so-called "marls"—occur at many points. It should be borne in mind that these "marls" of the coastal plain do not in any way resemble the fresh-water marls which are so largely used as cement materials in Michigan, Indiana, Ohio, etc. The North Carolina "marls" are simply soft and often quite clayey limestones. Many of them are suitable enough for use in cement manufacture, so far as composition alone is concerned. But the more important points as to fuel supplies and markets must be considered, and in these respects

the North Carolina deposits can hardly be regarded as satisfactory.

#### Kentucky.

It is only within the past year or so that the Portland cement industry has secured a start in Kentucky, the old and well-known "Louisville cement" being natural cement, made in entirely different fashion from Portland cement. At present the only Portland cement plant in the State is that of the Kosmos Portland Cement Co., located at Kosmosdale, near Louisville.

Four different series of limestones offer opportunities for cement development in Kentucky. The distribution of each of these series will be briefly indicated.

Limestones of Trenton age cover the greater part of the counties of Fayette, Scott, Bourbon, Franklin, Woodford and Jessamine, and also occur in smaller areas in Boyle, Clark, Mercer, Owen, Henry and Anderson counties. A narrow strip along the Ohio river, in Kenton and Campbell counties, also exposes these limestones. Most of these Trenton limestones are low in magnesia, and range from 90 to 95 per cent. in carbonate of lime. At different times it has been proposed to erect cement plants at Mentor and Ludlow to utilize these rocks along with accompanying shales.

The Cincinnati group of limestones and shales covers much of Kentucky lying between the Ohio river and a line through Louisville, Lebanon, Stanford, Mt. Sterling and Flemingsburg. These rocks also afford good opportunities for cement manufacture.

The subcarboniferous limestones occur in Meade, Hardin, Larue, Barren, Warren, Todd, Christian, Trigg, Caldwell, Crittenden and Livingston counties. As exposed in this area, they are usually very pure oolitic limestones, like the well-known Bedford limestone of Indiana. Shales of good quality can be usually obtained in the immediate vicinity, while in many localities fuel can be secured cheaply.

In the coal fields of Kentucky comparatively thin beds of carboniferous limestone occur at many points. These limestones are usually low in magnesia. Though commonly so thin as to require underground mining, the carboniferous limestones possess the great advantage of being close to the coal mines.

#### Virginia.

Though good cement materials can be found in almost every part of Virginia, the cement-making possibilities of the State are confined almost exclusively to the western and southwestern districts. In Tidewater Virginia "marls" occur of similar character to those found in North and South Carolina, and with the same defects as to manufacturing conditions. In the Piedmont and Blue Ridge districts occasional areas of crystalline limestone are found, but these deposits are still more unavailable, so far as fuel supplies are concerned. In the valley of Virginia, however, conditions are different, and the future Virginia cement industry will be concentrated in this area west of the Blue Ridge, where good raw materials are common and coal is cheap.

At present only one Portland cement plant is in operation in Virginia, that of the Virginia Portland Cement Co., located at Fordwick, some distance south of Staunton. The materials used here are the Lewistown or Helderberg limestone and the black Devonian shales.

Good limestones are so extensively distributed throughout the whole extent of

the valley region of Virginia that the location of future plants can be determined entirely by commercial considerations. It would seem that a plant located somewhere in the area between Bristol and Big Stone Gap would have many points in its favor, while another good location would seem to be near the northern end of the Shenandoah and Page valleys. This last point will be returned to in discussing West Virginia and Maryland.

#### West Virginia.

In spite of the extensive limestone and coal beds which are found in West Virginia, the plant of the Buckhorn Portland Cement Co. near Grafton is still the only Portland cement plant in the State.

Two series of limestones are particularly worth consideration in this connection. The first is the Greenbrier or subcarboniferous limestone, a heavy formation of quite pure and usually low magnesian rock, overlain by shales. This series is well exposed in the counties of Mercer, Monroe, Greenbrier, Summers, Pocahontas, Randolph, Tucker and Preston, and is the limestone used at the Buckhorn plant.

The second important limestone series is the Trenton, found only in the valley area in the counties of Berkeley, Jefferson, Pendleton and Hardy. This series seems to offer the best possibilities for cement development. Clayey limestones or "cement rock" of the same type that is so extensively used in the Lehigh district of Pennsylvania have been traced through Jefferson and Berkeley counties, and it is unlikely that such satisfactory cement materials will remain neglected for many years. A third less important group includes the Lewistown limestone, used at the Virginia Portland Cement Co. plant at Fordwick, Va. In West Virginia this is exposed in the counties of Pendleton, Grant, Hardy, Mineral and Hampshire.

#### Maryland.

No Portland cement plant has as yet been operated in Maryland, though it has recently been reported that one will soon be constructed in the Cumberland district, formerly so well known for its natural-cement industry.

In Washington and Frederick counties extensive areas of limestone outcrop. Many of these limestones are too high in magnesia to be satisfactory Portland cement materials, but it is probable that careful search would reveal the presence of beds of the clayey or slaty limestone which has proven such a valuable material in the Lehigh district. A plant using this material and located on a direct route between the coal fields and the cities of Baltimore and Washington should certainly have little difficulty in becoming a financial success.

Garrett, Allegany and Western Washington counties contain a number of belts of limestones which will probably prove serviceable for cement, but as yet no serious effort seems to have been made to develop them.

#### Automobile as a Practical Rig.

The Duryea Power Co., Inc., Reading, Pa., writes to the MANUFACTURERS' RECORD as follows:

"Our business is limited by the amount of capital we have available, and, being a little concern, does not grow rapidly. We employ here about 60 to 75 hands, turn out \$90,000 to \$100,000 work per year, have about three times as many orders on hand as ever before at this time, and if we secure the capital hoped for see ahead of us an extremely large business. We feel that the auto has not yet begun to be recognized by the American people as a practical rig, and when it is so recognized the demand will be beyond present conception."

# OPEN-HEARTH VS. BESSEMER STEEL

By EDWARD H. SANBORN.

[Written for the Manufacturers' Record.]

Statistics of the production of open-hearth steel in 1905, recently published by the American Iron and Steel Association, show how amazingly this process has grown in favor in the United States and how rapidly it is overtaking the Bessemer process in its tonnage. In 1905 the output of open-hearth steel was particularly significant, as it showed an increase of over 3,000,000 tons—from 5,908,166 to 8,971,376 tons.

The relative growth of the outputs of steel by the open-hearth and Bessemer processes is shown by the following table:

	Bessemer.	Open-hearth.
1880.....	1,074,262	100,851
1885.....	1,519,450	135,376
1890.....	3,688,871	613,232
1895.....	4,909,128	1,137,182
1900.....	6,584,770	3,398,135
1901.....	8,713,302	4,656,309
1902.....	9,138,363	5,687,729
1903.....	8,592,829	5,829,911
1904.....	7,859,140	5,908,166
1905.....	10,941,375	8,971,376

It is interesting to note from this table the comparison between 1902 and 1905, the two high-record years in the iron and steel industry. In three years the open-hearth output increased 3,283,647 tons, while the production of Bessemer steel increased only 1,803,012 tons, and during 1903 and 1904, while the Bessemer output fell off 1,279,223 tons, the open-hearth production increased 220,437 tons. Since 1900 the proportion of open-hearth steel has increased from about 33 to 45 per cent. of the total production by the two processes.

In seeking for the cause of the rapid expansion of the open-hearth steel industry it will be found that practically all of the increase has been in the output of basic steel. Prior to 1890, when Carnegie, Phipps & Co., Ltd., began the erection of an enlarged plant at Homestead for the production of basic steel, practically the open-hearth steel made in the United States was produced by the acid process. In the year ended June 30, 1890, less than 60,000 tons of basic open-hearth steel were made in the United States. The successful start by Carnegie, Phipps & Co., Ltd., and the Pennsylvania Steel Co. in the use of basic linings was followed by others, and by 1896, when the American Iron and Steel Association commenced to divide its statistics of open-hearth steel production, the basic process had already outstripped the acid process. The division of the open-hearth steel output since 1896 has been as follows:

	Acid.	Basic.
1896.....	522,444	776,256
1897.....	552,628	1,056,043
1898.....	1,569,412	1,569,412
1899.....	896,880	2,080,425
1900.....	855,044	2,545,091
1901.....	1,037,316	3,618,993
1902.....	1,191,196	4,496,533
1903.....	1,094,998	4,734,912
1904.....	801,799	5,106,367
1905.....	1,115,648	7,815,723

The prophecy that the open-hearth furnace will largely, if not entirely, supplant the Bessemer converter is not altogether a rash prediction, for this seems to be the inevitable result of the forces that are now at work. The open-hearth process presents certain advantages merely as a process, while the product itself has a wider range of utility and suitability than Bessemer steel, and statistics already quoted show how this greater elasticity as to material and wider range as to product have enabled the open-hearth product to increase so rapidly in tonnage.

Open-hearth steel has practically supplanted Bessemer in structural material and in plates, and probably the most significant development in the larger use of open-hearth steel is the rapidly-increasing use of this material for rails. A recent

newspaper paragraph stated that the Pennsylvania Railroad was about to place large orders for open-hearth rails, and while this item was not strictly accurate in all its details, it is a fact that the Pennsylvania Railroad and all its allied interests probably will soon be using open-hearth rails in preference to Bessemer.

The development of the open-hearth rail trade already has reached the point where the largest mill in the country is rolling rails regularly from this stock and is seeking orders on this basis in preference to furnishing Bessemer rails. At least one large railroad has definitely adopted open-hearth rails, and its specifications call for this material only. Service tests have established the wearing qualities of open-hearth rails to the satisfaction of those who use them, and as makers are beginning to show a preference for rolling rails of this stock, the conditions necessary for a large increase in the output of open-hearth rails seems to exist.

Prior to 1900 the production of open-hearth steel rails was insignificant, and did not assume significance until after the mill at Ensley, Ala., got into operation in

November, 1902. The following figures show how the output has grown:

	Tons.
1900.....	1,333
1901.....	2,093
1902.....	6,029
1903.....	45,054
1904.....	145,883
1905.....	185,264

It is of interest to note, in passing, that the first mill to be devoted exclusively to open-hearth rails, and the producer of most of the output thus far, was the plant of the Tennessee Coal, Iron & Railroad Co. at Ensley, Ala. It should be noted, too, that the making of basic pig-iron for the open-hearth steel industry also began in the South some years prior to the building of the Ensley plant.

The trend towards the larger use of basic open-hearth steel means much to the South. So long as Bessemer steel dominated there was no prospect of any large development in the manufacture of steel in the South. While there are deposits of iron ore in the South suitable for making Bessemer pig-iron, conditions have existed in every case which have rendered it impracticable to utilize them in the large way necessary to ensure success in making steel by this process. There is a larger supply of Southern ores of grades suitable for the broader range of the basic open-hearth industry, and the developments at Ensley might be duplicated elsewhere.

## FEATURES OF THE COAL AND IRON INDUSTRY.

By F. E. SAWARD.

[Written for the Manufacturers' Record.]

The season of recapitulation brings many thoughts. We find ourselves confronted with the fact that this country is running ahead of all others in the development of its coal and iron resources. Last year was a record in both commodities, and it looks very much like another for 1906, for with no idleness at the mines there will be an increase much above that of 1905. There is a good deal of talk of idleness, but wise counsels will no doubt prevent this. There is no need for it from any wise standpoint. Let us take up the coal output in the United States in the past year, and what do we find? A total of 310,000,000 tons bituminous and 75,500,000 tons anthracite, and the great State of Pennsylvania doing 180,000,000 tons, with West Virginia second, as Mine Inspector Paul puts the total in the last calendar year at 37,500,000 net tons.

Some figures of pig-iron production show that the United States is ahead in that respect. Thus:

	1905.	1904.	1903.
United States.....	22,992,380	16,497,033	18,009,252
Germany.....	10,813,983	9,944,261	9,926,318
Great Britain.....	9,592,737	8,562,658	8,935,063
Belgium.....	1,329,169	1,262,596	1,197,275
Canada.....	468,063	270,342	265,418
Other countries.....	8,345,835	8,345,835	7,962,995
Grand totals.....	53,542,047	44,883,295	45,696,232

Great Britain also had a good coal year in 1905. The preliminary figures show that the production of coal last year amounted to 236,111,150 tons, an increase over the 1904 total of more than 3,500,000 tons. Notwithstanding the short time worked at the English mines during the year, the opinion prevailed in many quarters that the production was still excessive as compared with the demand, and a considerable increase was generally anticipated. Although the rate of increase has diminished during the past few years, the conclusion that it will continue to do so is by no means warranted. The 1905 figures bear striking witness to the unabated vitality of the British coal industry, and it is even probable that the great advance over 1902 may be overtopped in the near future if the iron and steel trades and great manufacturing industries generally

are as prosperous as they are expected to be.

I have frequently referred to the possibilities of our coal being in demand abroad as the output in other countries remains at a standstill. Now there is a proposition, as it were, that we exchange coal for iron ore. This has been brought out by the American consul-general at Paris, Mr. Mason, who puts some pungent facts in a report recently sent to the State Department and published in full in the MANUFACTURERS' RECORD in its issue of March 8. The consumption of iron ore is now going on at a rate that threatens to exhaust the available deposits of that mineral—those of China excepted—in considerably less than a century, and perhaps within fifty years. Mr. Mason quotes statistics in which he places confidence and which indicate that the United States can count with certainty on only 1,100,000,000 tons of ore, but uses fully 35,000,000 tons a year. On the other hand, there is an assurance of an ample supply of coal here for three or four centuries at least, and in parts of Europe there is a scarcity. It is suggested, therefore, that an export trade in this commodity be organized, particular attention being paid to the requirements of France, and that iron ore from Spain, Finland and Scandinavia be secured as return freight.

In the comparison of coal qualities the consul says that the advantage of North America over European countries is overwhelming, and that, with what is now known, the present 280,000,000 tons annual output of American bituminous coal can be maintained for hundreds of years without exhaustion, while the European coal fields are running out. On the other hand, the foremost British metal journal predicts an iron famine in about half a century.

Other men have been keenly alive to the prospect, which grows darker yearly. During the 12 months ended December 31, 1905, the production of pig-iron in this country was a trifle less than 23,000,000 tons, and it is estimated that the whole

world manufactured only 54,000,000 tons in that period. In other words, America produced between 42 and 43 per cent. of the whole amount of pig-iron made, and yet has only an eighth or a ninth part of the ore in sight, excluding from the calculation the immense stores which are credited to China, but which are not yet worked.

### KEY WEST NAVAL STATION.

Improvements Under Way There or Contemplated.

[Special Cor. Manufacturers' Record.]

Key West, Fla., March 24.

Key West, Fla., is on the eve of great improvements, referring at this time to prospective government work. In an interview with Capt. William Henry Beeher, commandant of the United States naval station at Key West, I was informed that \$600,000 has been appropriated by Congress and approved by the President for this purpose. The following will indicate the character of the work to be executed: There have been \$5000 appropriated for a fresh-water pumping plant, \$6000 for a water system, \$12,000 for commandant's quarters, \$6000 for one officers' quarters, \$10,000 for a dispensary, \$105,000 for a central heat, light and power plant, \$3000 for a latrine, \$10,000 for grading and fencing, \$3000 for a sewer system, \$1200 to complete two officers' quarters, \$500 to complete marine railway and \$50,000 for a foundry and machine shop for steam engineering.

Commandant Beeher has suggested to the Navy Department the desirability of transforming Fleming's Key into a torpedo station, for which purpose its location admirably adapts it. Fleming's Key is perhaps two or three miles distant from Key West, 60 acres in area, and already belongs to the United States government. Commandant Beeher recommends the appropriation of \$500,000 by Congress for the carrying out of his timely suggestion, and there are indications that the naval authorities in Washington look with favor on the immediate carrying out of the commandant's views. Part of the building and construction work to be executed, in the event of the government deciding to push the work, will consist of erecting a substantial seawall of solid masonry around the island, raising the latter's surface, and deepening the surrounding water by dredging and other means.

In 1905 the government announced its intention of building a concrete seawall clear around the naval station water-front at Key West, and to this end requested bids from contractors. The lowest was, however, \$150,000, which sum Commandant Beeher considered excessive, and it is now understood the government will assume this work under the instructions and supervision of the commandant. The sum mentioned, however, covered estimated cost of store and supply houses. Commandant Beeher is interested in knowing cost of suitable dredging and other outfit necessary for the undertaking.

The importance which Key West assumes as a naval station is further reflected by the intention of the government to transport the entire buildings, tanks, machinery, storehouses, etc., now on the island of Dry Tortugas, 60 miles west of Key West, to the latter station. The cost of the buildings, storehouses, shops, etc., in Dry Tortugas exceeds \$2,000,000. As a naval base this latter has been abandoned and a quarantine station established in its stead. Realizing the great value of the construction material and machinery generally in Tortugas, and the necessity of equipping and fortifying Key West in a manner commensurate with its unique position as a naval base, Commandant Beeher suggested to the Navy Depart-



ment the practicability of dismantling, transporting and erecting on Key West the entire plan of buildings, shops, etc., now on Tortugas. An estimate of the cost of executing this undertaking was forwarded by the commandant to Washington today, the sum being \$200,000 and the time necessary to perform this work from 9 to 12 months. There is little doubt of the government's not looking with favor on Commandant Beehler's comprehensive plan of removing and reconstructing the costly and actually needed buildings and naval accessories on Key West. In this event, considerable derrick and hoisting machinery will be needed should the government not let the undertaking by contract.

JOHN BANNON.

### Life-Blood of a Nation.

Editor Manufacturers' Record:

The commerce of a nation, a State, a section, has been aptly called somewhere its life-blood. No section can reach the highest measure of commercial independence which does not do its own exporting and importing through its own ports.

The South, with half of the deep-water ports of the entire country, finds all of them in closer proximity to the nearby trade of the West Indies, Central and South America than any other ports; \$800,000,000 of the \$1,200,000,000 of this trade is now controlled by foreign nations, but \$400,000,000 by the United States.

The Southern ports are better situated for distribution of the imports of this trade, and the assembling of its exports for shipment, than any other ports of this country. I have made some comparisons in recent short articles with the trade of all Asia.

The South has in the past 25 years created nobly a great wealth of products. Her mission, now more important, if that is possible, than her internal development, is to find profitable markets. Shall she, through mental longsightedness, overlook this nearby commerce, growing more rapidly than any in all history? Surely it only needs clear knowledge of its importance to take advantage of it.

How does the trade of Cuba and Porto Rico with the United States compare with the trade of the great nations with whom we trade? It aggregates for 1905 \$175,000,000, in round numbers, equaling 24 per cent. of our greatest trade with the United Kingdom, 52 per cent. of our next greatest trade with Germany, 94 per cent. of our next greatest trade with France, exceeds our important trade with the Netherlands, \$72,000,000, and with Belgium, \$195,000,000. The trade with the United States of the United Kingdom grew 1905 over 1904 6 per cent., with Germany 10 per cent., with France 15 per cent., with Cuba and Porto Rico combined 32 per cent.

Our trade with Russia is deemed important. It is \$33,000,000, against Cuba's and Porto Rico's \$175,000,000 for 1905.

Is it not time for the South to avail herself of a fair share of this trade at her doors, demanding everything we raise or manufacture?

C. P. GOODYEAR.

Brunswick, Ga.

### To Punish the South.

Washington correspondence of the Boston Transcript says:

"Punishment for the South is scheduled in any subsidy bill which now becomes law. The merchant marine commission, viewing national needs and considering the question in its national aspects, decided that the establishment of various steamship lines out of the Gulf ports to South America was an essential requirement to the rehabilitation of our merchant marine. Incidentally—although this did not direct the action—they expected to

get some Southern democratic votes. They got none. The bill has gone over to the House, where its champions realize that, if passed at all, it must be passed by Northern republicans. How its managers feel about the special plums which had been intended for the South is well set forth by Representative Humphrey of Seattle, a member of the House committee and also of this merchant marine commission. He says, in speaking with the Transcript correspondent:

"I believe the House will cut out a large part, if not all, of the proposed mail routes running from Southern ports. Justness and decency demand that this be done. An examination of the Senate bill will reveal the fact that the Southern States have many more mail routes under this bill than any other section in proportion to business and commercial importance—many more than any just division would give. Several of these routes, I think more than half of them, were added by amendments made by Southern senators. Then with true democratic consistency, after the bill was so amended that the South would be more benefited than any other section, every Southern senator voted against it. As the democrats of the South are always opposed to a 'subsidy steal,' with a distinct mental reservation, however, provided that it is not their 'steal,' no true patriot should desire to imperil virtuous souls by thrusting this infamy upon them. Since they do not want subsidies, since they are opposed to this bill, since every Southern senator voted against it, their conscientious scruples should be regarded, and I am confident they will be. I am in favor of giving assistance to those who want it and who are willing to help get it. The Southern lines should be stricken from the bill."

### The New Willard Bag Factory.

In the rebuilding of the factory of the Willard Bag & Manufacturing Co., destroyed by fire recently, Wilmington, N. C., will have a manufacturing enterprise of large extent. This plant will comprise a main building 450x200 feet, three stories high, with a two-story extension on each side, all to be equipped with modern machinery for manufacturing and printing burlap bags and overalls. The new plant's capacity will be much greater than that of the old plant. It will have 20 bag machines with an annual capacity of 4,000,000 bags, working up 6,000,000 yards of burlap imported from India. There will be five printing presses. In the overall department there will be 200 machines, consuming 2,000,000 yards of cloth annually in the production of 40,000 dozen overalls, and employing 200 girls. The bags produced are sold mainly to fertilizer manufacturers, but peanut factories and other plants are also supplied. In all, about 300 persons will be employed. Plans and specifications for the buildings have been prepared by H. E. Bonitz, and construction work is to begin at once.

### The Fuller Cotton-Gin Works.

It is announced that the Fuller Combining Gin Co. of Charlotte, N. C., will equip its cotton-gin manufacturing plant with electric power, transmitting same throughout the establishment by the use of motors. The company's intention is to purchase the very latest and most economical machinery for its purposes, and is inviting information that will assist in carrying out this plan. The machinery for which the company is in the market includes woodworking and ironworking apparatus and foundry equipment. Correspondence in this connection can be addressed to James T. Fuller, president of the Fuller Combining Gin Co.

This Charlotte plant will be a tempo-

rary one, and will not make the castings to be used. Later in the year it is the intention to build a large main plant for manufacturing the Fuller cotton gins. The location of this permanent factory has not been determined, and the cities of Macon, Ga.; Montgomery, Ala.; Jackson, Tenn.; Nashville, Tenn., and Chattanooga, Tenn., have been under consideration. The final selection will be that point where the company will have the greatest advantages, including low freight rates, low cost of material and satisfactory labor conditions.

### Southern Ice Exchange.

The Southern Ice Exchange, in session at Richmond, Va., last week, elected the following officers and directors: President, W. E. Worth, Wilmington, N. C.; vice-president, Leon Burton, Helena, Ark.; secretary and treasurer, M. Thompson, Greensboro, N. C.; executive committee, W. J. Rushton, Birmingham, Ala.; C. D. Wingfield, Richmond, Va.; W. L. Ware, Jacksonville, Fla.; Abe Ellis, Augusta, Ga.; F. N. Reike, Paducah, Ky.; George B. Townsend, Anderson, S. C.; C. E. Livingston, Greenville, Miss.; E. Woodruff, Atlanta, Ga.; F. L. Riggs, Chattanooga, Tenn.; S. P. Baker, Columbia, S. C.

### A Tidewater Proposition.

There have been reports current that Messrs. E. R. Chapman & Co. of 80 Broadway, New York, were negotiating for the purchase of the Tidewater Steel Co. of Chester, Pa., in connection with proposed coal and iron developments in Virginia and West Virginia. The MANUFACTURERS' RECORD is in a position to state that these reports are rather premature, but that the firm named has had some discussion regarding the consolidation of certain coal and iron properties in the two Southern States mentioned, with a view to forming a corporation which should be entirely self-contained so far as raw material is concerned, carrying such raw material through to the finished product. However, no conclusion has been reached regarding the enterprise, and proper announcements will be made at the proper time if plans materialize.

Later press reports state that the proposed new organization contemplates a capital stock of \$8,000,000 and \$4,000,000 of bonds, \$2,000,000 of the latter amount to be used for working capital; also that the Diamond State Steel Co. of Wilmington, Del., is included in the merger proposition. Messrs. Chapman & Co. are largely interested in the Chapman Iron, Coal & Coke Co., operating a blast furnace at Goshen, Va., besides owning the Rich Patch iron-ore mines and large coal properties in Virginia.

W. H. Hendren, manager of the Texas Transport & Terminal Co. at New Orleans, is quoted as making the announcement that New Orleans has secured another new line of steamers, to operate direct to Rotterdam, with semimonthly sailings. The new line will be known as "the Furness and Point Line," and the first vessel under its auspices will be the West Point, due at New Orleans about April 10.

In the reorganization of the Atlanta Merchants and Manufacturers' Association Mr. Joseph W. Hill was elected secretary and a committee consisting of Messrs. R. H. White, Walter O. Foote, Clarence Houston, Ralph Rosenbaum, P. D. Baker, E. C. Callaway, Ernest L. Rhodes, E. E. Fulton, Alfred Truitt and Gordon Kiser was appointed to complete the plan for the reorganization. Mr. J. K. Orr remains as president.

Mr. W. J. Moore of Detroit, Mich., has been elected secretary of the Augusta (Ga.) Chamber of Commerce.

### A MINERAL STOREHOUSE.

Alabama's Vast Wealth of Iron and Coal—Great Future of the State.

[Special Dispatch to Manufacturers' Record.] Birmingham, Ala., March 28.

While the final announcements of the proposed improvements by the Tennessee Coal & Iron Co. and the Republic Company have not yet been made by the new directors who have been here for several days, it is understood that several million dollars will be expended in building a new steel plant, probably at Thomas, the site of the Republic's furnaces, and in other developments, including the enlargement of coal and ore plants. John W. Gates may be a great speculator, but he is also a great steel expert, and he knows the iron and steel business and all its vast possibilities. His associates are likewise men of experience in iron and steel, as well as in finance, and the logic of the situation guarantees that at last Alabama is to enter upon a period of metallurgical development somewhat commensurate with its vast resources in ore and coal.

One of these new Tennessee directors a few days ago, in discussing the situation, said: "The Lake Superior district has mined 300,000,000 tons of ore, and out of that 3000 millionaires have been created. No one who has studied Alabama's iron interests will put its ore supply at less than 1,500,000,000 tons. If 300,000,000 tons of Lake Superior ore have created 3000 millionaires, how many millionaires will be created by Alabama's 1,500,000,000 tons?"

With the development of this district now assured on a scale to command the world's attention, with the vast accumulation of capital turning to coal and iron and kindred interests as the safest investments that man can make, not only Alabama, but the whole South, makes a great step forward. No longer beggar for the world's capital, no longer a pleader for public realization of its vast wealth of coal and iron, Alabama is everywhere regarded as one of the world's greatest predestined centers of iron and steel and all the diversified interests which naturally follow the lead of the furnace and the rail mill. This is seen on every hand. An Atlanta wire and nail concern is spending \$750,000 enlarging its plant, foundries and machine shops are expanding in every direction—all the logical outgrowth of the iron development of Alabama. This State is now producing twice as much pig-iron and mining twice as much bituminous coal as the United States made of the one and mined of the other in 1860. It is even making nearly one-half as much iron as the whole country made as late as 1880, but its real development has scarcely begun. All that it has done is to get ready for the real growth of the coming years—a growth which must be more nearly than heretofore commensurate with the latent wealth of the region.

It is estimated that at least one-half of the known ore supply of the United States is in Alabama. The tremendous significance of this can be realized when it is remembered that at the present rate of world consumption the quantity of ore used, up in the next 10 years would equal the aggregate consumption from the beginning of history to the present time; but, instead of consumption continuing at the present rate, it is annually growing at a pace which is creating a serious discussion as to the future of the world's iron trade. J. Stephen Jeans, secretary of the British Iron Trade Association, a world-wide authority, in his recent article in the MANUFACTURERS' RECORD took the ground that while new sources of ore supply will doubtless be found, the present known supplies of the world are only equal to about 50 years' consumption, and he intimated that

iron ores may become of such priceless value that no country will permit their exportation.

In the light of these facts, and with the iron trade of the country doubling on an average every 10 years, we may readily believe that Mr. Gates and his associates feel that they got a great bargain in their Alabama purchases, for while the present equipment may not justify such figures, the hundreds of millions of tons of ore and coal which they bought furnish a basis for almost unlimited extension of furnaces and steel works. Out of the immediate Birmingham district other vast ore supplies are being opened up, and so great is the interest in the immense discoveries, estimated at several hundred million tons of ore in what is known as the gray-ore section, that the United States Geological Survey is now making a special investigation there. Coal lands are steadily enhancing in value, buyers from many sections are looking for coal and ore properties, and everywhere the trend is for far-reaching activity in all this vast mineral region.

R. H. E.

### The Iron and Metal Trades.

The *Iron Age* in this week's review says:

"The uncertainty with regard to the labor situation in the bituminous coal fields has been the principal factor affecting the pig-iron markets of the country. The consumption is on so enormous a scale and is crowding the full make so closely that even a moderate enforced restriction would be highly embarrassing. It really does not look as though consumers are very much frightened, and the concessions which a number of sellers continue to make occasionally indicate that some manufacturers of pig-iron are dubious as to the future, so far as the prices are concerned which have been established for some months past.

"Deliveries of crude and finished iron and steel are proceeding at a record rate, and in some of the heavy lines contracting for the future is going on at an extraordinary pace. This is notably the case in steel rails. With what the mills have on their books and with what is now under negotiation the majority of the plants are provided with work until near the end of the year.

"The most interesting transaction in the rail trade during the past week has been the sale by the United States Steel Products Export Co. of 50,000 tons for delivery this year to the Grand Trunk Pacific Railroad. It is understood that this order came to an American mill simply because the Canadian rail mills were utterly unable to make the rails. For home roads the following sales were made: From 60,000 to 70,000 tons to the Atchison, Topeka & Santa Fe, this being in addition to former orders aggregating 57,000 tons; to the Georgia Central, 10,000 tons in addition to former orders; to the Chesapeake & Ohio, 10,000 tons, and to an Alaska road 4000 tons.

"There is a steady flow of good contracts coming out for the structural mills. In moderate-sized and small lots an aggregate of 54,000 tons has been booked by the American Bridge Co. thus far this month. Among the other contracts taken by other plants during the last week are 2000 tons for the Buffalo, Rochester & Pittsburg and 4000 tons for the Erie. There are in the market 7000 tons for the Lehigh Valley, 6000 tons for a building at St. Louis and an aggregate of 7100 tons for two buildings on the Pacific coast.

"Steel prices have hardened all along the line. In Pittsburg the Carnegie Steel Co. has announced an advance of \$2 per ton, which makes the official price for open-hearth and Bessemer billets \$27 per ton and for sheet and tinplate bars \$28 per ton, random lengths."

## RAILROADS

[A complete record of all new railroad building in the South will be found in the Construction Department.]

### TO THE TEXAS COAST.

**New Railroad Incorporated to Connect San Antonio and Other Points With the Gulf.**

The Texas Railway Co., which has filed a charter at Austin, is one of the most ambitious projects lately incorporated in Texas. It proposes to build about 260 miles of line connecting Port O'Connor or Alligator Head, on Matagorda bay, with San Antonio, Seguin, New Braunfels, Seadrift, Victoria, Yoakum and Lavaca. The main line is that from Port O'Connor to New Braunfels, and branches will reach San Antonio and Seguin.

A press report from San Antonio says that a local capitalist will finance the plan, and that the stockholders include gentlemen connected with eight banks in that place and also others of well-known financial standing. Among those interested are J. P. Barclay, M. Goggan, Nat M. Washer, Fred Cook, W. W. Lipscomb, Marshall Hicks, Thomas S. Goggan, William Aubrey, Thomas L. Conroy, W. C. Rigsby, Theodore Harris, C. H. Florian, J. D. Guinn and M. S. Blackburn, all of San Antonio; R. S. Dilworth, T. F. Harwood, B. N. Peck of Gonzales, W. L. Johnson, H. Roos, J. E. Lander, L. M. Haldor, John M. Green, Dan T. Price, Ed. B. Caruth of Yoakum, William Green of Shiner, C. S. E. Holland, Theodore Buchler, J. K. Hexter, F. B. Lander of Victoria, Samuel Granat of New York city, Joseph Faust, Harry Landa, William Clemens of New Braunfels, John Sullivan, Oklahoma, and E. M. Rowley of Mexico.

Further particulars about the Texas Railway are given in the *San Antonio Express*, which says that the line is intended to run from San Antonio by way of Seguin and Gonzales to Yoakum, 120 miles; from Yoakum to Victoria, 40 miles, and from Victoria to Port O'Connor, by Seadrift, 51 miles. A branch line of 32 miles from Yoakum to La Grange, connecting with the Katy at that point, is to be built.

The general offices of the road are to be in San Antonio, the leading officials will be San Antonio people, and the road is to be built by Texas capitalists. So far it is an independent line, but traffic arrangements are said to have been made with the Missouri, Kansas & Texas Railway, and it is mentioned as an especially desirable property for that system to own. The stock is all taken.

A branch line may be built to Cuero; in fact, the route has not been definitely determined. Certain obstacles make it possible that the line will not run by way of Yoakum, but will take a westerly direction and pass through Cuero.

It was announced by certain of the stockholders last evening that work would be begun within 60 days. The first section of the line will be built north from Victoria to Yoakum. This will be the easiest section of the line to build. The next section will be built from Victoria south to Port O'Connor.

From Yoakum south the road will be built by a construction company organized by San Antonio people. The remainder of the road will probably be built by contract. It is estimated that the construction and equipment of the road will cost at the rate of \$12,000 a mile.

Practically all of the land in the territory south of Victoria is owned by six persons. The line is to be known as the Port O'Connor Route, taking the name of the largest landholder. Thomas O'Connor's ranch borders on the Gulf, and comprises over 100,000 acres. The other

ranchmen are Henry Trayler, including the Trayler estate, C. S. E. Holland, John Waelder and A. Levy.

While the ranches remained intact the idea of building a railroad could not be entertained for a moment. But the ranches are soon to be broken up into smaller tracts and sold.

Matagorda bay, on which is situated Port O'Connor, is described as having 12 feet of water, but it is estimated that the expenditure of \$1,000,000 by the government would make it a satisfactory harbor for large steamers. The bay is noted for fine fish and oysters, and the establishment of a summer resort hotel is considered probable.

It is said that the Texas Railway Co. proposes to use the grade of the old proposed Guadalupe Valley Railroad. This grade, which extends from Port O'Connor to Yoakum, about 90 miles, is reported to be in good condition.

### SLOAN'S VALLEY LINE.

**A Southern Railway Short Cut—Louisville & Nashville Plans.**

Mr. J. M. Ross, Somerset, Ky., writes the *MANUFACTURERS' RECORD* concerning the proposed Sloan's Valley Railway, which has just been incorporated. He says that rights of way have been secured and that an extension of 20 miles will be built up Cumberland river from Sloan's valley, near Somerset, on the Cincinnati, New Orleans & Texas Pacific Railway. He also writes that the Southern has secured control of the Kentucky & Tennessee Railroad, which is being built from Stearns, Ky., up Rock creek to connect with the Tennessee Central Railroad at Johnson Stand. This line will shorten the route nearly 100 miles from Cincinnati and Louisville into Nashville over the Southern Railway. Continuing, Mr. Ross says that the Kentucky & Tennessee Railroad is developing one of the finest coal fields in Kentucky, there being two thick veins of high-grade coal for almost its entire length of 60 miles. One vein is five feet clean domestic gas coal and the other is three and one-half feet clean coal, excepting a small amount of sulphur.

It now looks like the Louisville & Nashville is planning to build from Lebanon, Tenn., through Jamestown, Tenn.; Monticello, Somerset and Woodbine, up Indian creek and thence to connect with its Cumberland Valley line at Emanuel, Ky. By the Indian creek route the long heavy grade between Emanuel and Rossland will be avoided, and this will give the Louisville & Nashville a most direct route east, passing through immense coal fields in Fentress county, Tennessee, and Wayne, Pulaski and Whitley counties, Kentucky. It will also develop the great coal beds of Rockcastle and the upper Cumberland rivers. Surveys from Jamestown, Tenn., to Somerset have been made, presumably by Boston capitalists, but which are thought to be really for the Louisville & Nashville Railroad. The belief that the Louisville & Nashville is back of this plan is stimulated by the fact that the Southern Railway recently purchased the Eastern division of the Tennessee Central, and by the supposition that the Louisville & Nashville would consequently desire to have equally fast facilities east and west.

Mr. G. B. Nicholson, chief engineer of the Cincinnati, New Orleans & Texas Pacific Railway, writes from Cincinnati, Ohio, to the *MANUFACTURERS' RECORD* that the route of the proposed Sloan's Valley Railway is from Sloan's Valley Station, in Pulaski county, Kentucky, eastward to the Cumberland river and thence up that stream to its confluence with the Laurel river, a total distance of about 25 miles. No bids for construction have been requested.

## SPARTANBURG TO AIKEN.

**A Railroad Which Will Develop Glenn Springs, a South Carolina Resort.**

Mr. T. B. Thackston, manager of the water department of the Glenn Springs Co., writes from Glenn Springs, S. C., to the *MANUFACTURERS' RECORD* as follows:

"The Spartanburg & Glenn Springs Southern Railway will receive its commission from the secretary of State of South Carolina on March 31. The incorporators are J. B. Lee, Aug. W. Smith, V. M. Montgomery, W. S. Montgomery, A. L. White and T. B. Thackston. The capital stock proposed is \$100,000, with the privilege of increasing it to \$1,000,000. The termini will be Spartanburg on the north and Aiken on the south. The length of line will be a little more than 100 miles, traversing several townships in the counties of Spartanburg, Union, Laurens, Saluda, Edgefield and Aiken. The motive power employed will be electricity or steam, perhaps both, or any other motive power that may be determined upon. An inspection of the county map of South Carolina will show several feasible routes from Spartanburg to Aiken, touching such towns as Clinton, Newberry, Whitmires, Saluda, Edgefield, Johnston and Trenton.

"The proposed line will open up a splendid farming section of the country not now enjoying railroad facilities, and also would prompt the development of a number of water-powers for manufacturing purposes. The timber resources along the line are considerable, and would prove inviting to lumbermen. This road would be the most direct line for tourists from the West and Northwest to the winter resorts at Aiken, Augusta and Florida points, and the shortest haul for coal and other raw material intended for the various manufacturing plants on the numerous railroad lines crossing the State from east to west. The railway would make a connection with the three principal railroad systems of South Carolina.

"The Glenn Springs Company, which recently purchased the famous Glenn Springs, will spend several hundred thousand dollars in fitting up this resort for winter tourists; in other words, Glenn Springs is destined to become an all-year-round resort second to none in the South. Its mineral water is now being shipped to all parts of the United States, and when the new bottling plant now under construction is completed the facilities for handling plain mineral water, carbonated water and ginger ale will be second to none in this country.

"It is proposed to operate a rapid trolley service between Spartanburg and Glenn Springs at an early date."

### Baltimore & Washington Electric.

The contract for the Washington, Baltimore & Annapolis Electric Railway has been let to the Fidelity Construction Co. of Detroit, Mich., and, according to the contract, the grading, ballasting and track-laying is to be completed in a year. The president of the railway company is Geo. T. Bishop, and J. G. Masterton is secretary and treasurer. Its offices are in the Maryland Trust Building at Baltimore.

The contract just let covers that part of the line between the city limits of Baltimore and the outskirts of Washington, about 30 miles. Considerable grading was done by another company, which undertook to build a line between the two cities, and much of this, it is expected, will be used. The contract for the terminal line in Baltimore, which is under the name of the Baltimore Terminal Co., has not been let, as the franchises have not yet been granted by the city council. The company has secured property at the intersection of



Park avenue, Liberty and Marion streets for its Baltimore terminal.

The company owns the Washington, Baltimore & Annapolis Railroad, 22 miles long, from Annapolis to Annapolis Junction, and this it is proposed to convert to an electric railroad in order to provide for the connection to Annapolis. Furthermore, the company owns the Washington, Berwyn & Laurel Electric Railway, extending from Washington to Laurel, Md., about 18 miles, and part of this latter line will be used for the road connecting Baltimore and Washington.

#### NORFOLK RAILWAYS.

##### Extensive Improvements Proposed on the Williams and Middendorf Properties.

Plans are under way to make extensive improvements to the street railways in Norfolk, Portsmouth and Berkley, Va., which are controlled by Middendorf, Williams & Co. of Baltimore and John L. Williams & Sons of Richmond and associates. It is understood that new capital will be put in the properties, and that a new company will be formed which will control the Norfolk Railway & Light Co., the Norfolk, Portsmouth & Newport News Company and the Berkley Street Railway.

The plans provide for issuing \$2,000,000 more of capital stock, the proceeds to be used for the improvements which are demanded to provide for handling traffic during the coming Jamestown Exposition. A new power station costing about \$1,000,000 will be erected and will furnish 15,000 more horse-power. Other expenditures will be made upon the tracks and other parts of the property, and new cars will be added to the equipment.

A meeting of stockholders is to be held on April 19, when the preliminaries for fulfillment of the plans are to be arranged. The proposed new corporation, which may be called the Norfolk & Portsmouth Traction Co., will operate 112 miles of railway, besides the lighting and power plants.

#### The Southern at New Orleans.

Some interesting railroad gossip comes from New Orleans to the effect that it is probable that the Southern Railway will soon have its own line into New Orleans. While officials of the company are quoted as denying a report that the Southern has purchased the New Orleans & Northeastern, over which it obtains entrance to New Orleans, one of them, it is said, would not deny that the Southern hoped to soon own a line into that city. A later report says that the Mobile & Ohio Railroad, which is controlled by Southern Railway interests, has entered into an agreement to purchase the desired line.

Still another report is that the Southern has made arrangements with the New Orleans Great Northern Railroad, that is building northward from Slidell, La., to Monticello, Miss., and which, it is said, will eventually reach Jackson. This road has the right to build its own line from Slidell to New Orleans.

The visit of the principal officials of the Southern Railway to New Orleans was, it is stated, for the particular purpose of inspecting the properties of the New Orleans Terminal Co., in which the Southern is jointly interested with the Frisco system. The party visited the site of the proposed passenger station at Basin and Canal streets, and also the steamship terminals at Chalmette.

#### Coast Line Changes.

The Atlantic Coast Line announces that on April 1 the second division will be divided into two divisions, namely, the second division, Mr. M. Riddle, general superintendent, Savannah, Ga., and third division, Mr. H. A. Ford, general super-

intendent, Jacksonville, Fla. The second division will comprise the Savannah, Thomasville and Montgomery districts, the third division the Jacksonville, Gainesville and Lakeland districts and Jacksonville terminal.

Appointments on the third division effective April 1 are also announced as follows: Mr. J. C. Higgins, superintendent of the Jacksonville district at Sanford, Fla.; Mr. R. A. McCranie, superintendent of terminals at Jacksonville, Fla.; Mr. A. L. Glass, superintendent of the Gainesville district, Gainesville, Fla.; Mr. H. B. Connelly, superintendent of the Lakeland district at Lakeland, Fla.; Mr. A. P. Connelly, superintendent of transportation; Mr. D. W. Gross, engineer of roadway; Mr. E. J. Smith, assistant superintendent of motive power, all at Jacksonville, Fla.

#### COAL TO THE OHIO.

##### Plans of a New Company Incorporated in Kentucky.

The Ohio & Licking River Railway Co. of Montgomery county, Kentucky, has been incorporated to build a line from a connection with the Louisville & Nashville Railroad in Fleming county to a point in Rowan county where Triplett creek empties into Licking river, and thence through Bath, Menefee and Morgan counties, a total distance of approximately 60 miles. The incorporators are Woodson Poor of Cincinnati, Ohio; R. H. Winn of Mt. Sterling, Ky., and Robert Young of Farmer, Ky.

One of the incorporators writes the MANUFACTURERS' RECORD that the object of the new company is to build an extension to the Licking Valley Railway, a narrow-gauge line extending from Salt Lick Station, on the Chesapeake & Ohio Railway in Bath county, Kentucky, up the Licking river into coal and timber fields. The extension will be northward, crossing the Chesapeake & Ohio to a junction point with the Louisville & Nashville in Fleming county, and giving it an outlet to the Ohio river. The new company will take over the old one, and the entire line will be made standard gauge.

#### Southern to Mt. Vernon.

The Southern Railway has issued an extremely attractive booklet entitled "Mt. Vernon. Former Home of George Washington," the cover representing front and rear views of the house. It is profusely illustrated, and in studying the photographic reproductions, which are of an exceedingly high character, the reader can easily imagine himself going through the house and visiting the many points of interest about the grounds. The book also contains views of the city of Washington, including the Capitol, White House and Library. The reading matter is a brief description of the photographs and incidentally shows the progress in transportation between the eighteenth and the present century, or between the stage coach and the excellent accommodations afforded by the Southern Railway. S. H. Hardwick is passenger traffic manager and W. H. Tayloe general passenger agent of the Southern at Washington, D. C.

#### Death of Mr. H. M. Emerson.

Mr. Horace M. Emerson, general traffic manager of the Atlantic Coast Line, who died of heart disease at his home in Wilmington, N. C., on March 23, was 46 years of age, and was well known in the railroad world. The company has issued a formal announcement of his death, and states that the general offices at various cities will be draped with mourning in respect to his memory. Mr. Emerson spent his entire railway service with the Atlantic Coast Line, entering its employ as a clerk at Portsmouth, Va., in 1876. Sub-

sequently he was a clerk at Baltimore, and later at Wilmington, where he remained, advancing step by step until he attained the high position which he held at the time of his death.

#### St. Louis Freight Terminal.

The Municipal Bridge and Terminal Commission of St. Louis proposes to establish an extensive freight terminal system in the center of that city, with branch terminals in other sections within the city limits. This it is hoped to do through friendly co-operation with the railroads, and Albert T. Perkins, superintendent of the St. Joseph division of the Burlington system, has been appointed adviser to Robert Moore, the engineer of the commission. The proposed central terminal, covering a district now principally devoted to railroad uses, would embrace a section six blocks long and four blocks wide and fronting on the Mississippi river south of Cass avenue.

#### Birmingham Terminal Started.

Construction has begun at Birmingham, Ala., on the new union terminal station, Brown & Jones, local contractors, starting the grading. Oliver Sollitt & Co. of Chicago have the contract for the building, the architect of which is J. Thornton Marye of Atlanta. Walter H. Harrison is engineer in charge of the terminal, and the president of the terminal company is George B. McCormack of Birmingham. It is expected to complete the terminal by January next.

#### Southern at Louisville.

An official of the Southern Railway informs the MANUFACTURERS' RECORD that the contemplated improvement at 13th and High streets, Louisville, Ky., is the laying of seven additional team tracks and the paving of all space between these tracks for heavy traffic. The inbound freight house will also be moved south for a distance of about 30 feet. The change in location of several city streets at this point is necessitated on account of this improvement.

#### Eldorado & Wesson.

The Edgar Lumber Co. of Wesson, Ark., writes the MANUFACTURERS' RECORD that the Eldorado & Wesson Railway will be a standard-gauge line and will be completed for 10 miles this season. The company has purchased 60 acres of land at Eldorado, Ark., for terminal facilities, etc., and connections will be made there with the St. Louis, Iron Mountain & Southern Railroad and with the Rock Island system.

#### Railroad Notes.

A dispatch from Savannah says that the Central of Georgia Railway has ordered 25 freight, 5 switch and 2 passenger engines from the Baldwin Locomotive Works.

Contractors have begun work at La Porte, Texas, on the proposed Houston and Galveston electric interurban railway, of which J. O. Ross of Houston is president. The line will be about 50 miles long.

The Louisville, Henderson & St. Louis Railway Co. announces that on and after April 1 all trains of the company will arrive at and depart from 10th-street station, 10th and Broadway, instead of from the 7th-street depot (formerly Union depot), Louisville, Ky. L. J. Irwin is general passenger agent.

The Newberry (S. C.) Chamber of Commerce has been organized with Messrs. Z. T. Wright, president; George W. Summer and E. R. Hipp, vice-presidents; R. G. Smith, secretary, and W. G. Mayes, treasurer.

## TEXTILES

[A complete record of new textile enterprises in the South will be found in the Construction Department.]

Correspondence relating to textile matters, especially to the cotton-mill interests of the South, and items of news about new mills or enlargements, special contracts for goods, market conditions, etc., are invited by the MANUFACTURERS' RECORD. We shall be glad to have such matter at all times, and also to have any general discussion relating to cotton matters.

#### Southern Bankers and Cotton.

At the special request of President Harvie Jordan of the Southern Cotton Association, Mr. John D. Walker of Sparta, Ga., president of the First National Bank of Sparta and of six other Georgia banks, and likewise interested in various business enterprises in his city, has consented to serve the farmers of the South again by undertaking to ascertain from the banks of the South the exact status of cotton from the bankers' standpoint, and whether or not it is considered by the Southern bankers as a feasible business proposition to co-operate with the New York or New Orleans syndicate for the purpose of obtaining a better price for the unsold portion of the 1905 crop, and he will proceed at once to communicate with the Southern bankers and find out their views. Mr. Walker not only served last year as secretary-treasurer of the Southern bankers' executive committee, but at the New Orleans convention in January, 1906, he was elected chairman of the bankers' convention, which convened there, and he is also treasurer of the Georgia division of the Southern Cotton Association.

#### The Abingdon Cotton Mills.

Last week the MANUFACTURERS' RECORD referred to the plans of J. L. Hand, president of the Pelham Manufacturing Co., Pelham, Ga., and his associates to take over, improve and operate the Madison Manufacturing Co. plant at Huntsville, Ala. This plant of 15,000 spindles and 525 looms is to receive new machinery to cost from \$30,000 to \$50,000, but the details of the betterments have not been decided as yet. Mr. Hand and his associates will incorporate the Abingdon Cotton Mills in furtherance of their plans, the capital stock to be \$216,000 and incorporators will be Messrs. J. L. Hand, J. J. Spalding of Atlanta, Ga.; Milton Humes of Huntsville, W. L. Barrell of Lawrence, Mass., and Fred S. Bennett of Englewood, N. J. Mr. Hand will be president; Mr. Barrell, vice-president, and T. W. Pratt, secretary-treasurer. The company's capital is divided into \$150,000 common stock and \$66,000 preferred at 7 per cent. interest, cumulative. It is possible 5000 spindles will be added to the equipment.

#### Silk for Texas.

It is announced at El Paso, Texas, that Ging Hasekama, the Japanese who declares he will make El Paso famous as a producer of silk from the silkworm, has returned to that city and will begin the planting at once of the 2500 mulberry trees which were purchased by the county for him as an experiment.

The trees will be planted on a tract of 50 acres, irrigated by pumped water.

Within the course of six weeks it is expected that the trees will be sprouting. Immediately Mr. Hasekama will order the silkworms, which will be imported from Japan, and by the time they arrive he says the trees will be ready for habitation by the worms.

Mr. Hasekama declares he is positive of the success of the method, as he has cultivated the worms in Japan under con-

ditions practically the same as exist here, and in a climate almost identical with El Paso's. A local florist has received the trees from an Eastern nursery.

#### Organizing Two Mills at Lumberton.

It is proposed to build two more cotton mills in Lumberton, N. C., where there is now in operation one plant, the Lumberton Cotton Mills, capitalized at \$175,000 and operating 12,000 ring spindles. One of the new companies is projected by prominent stockholders of the Lumberton Cotton Mills, and Messrs. R. D. Caldwell (president of the company named), A. W. McLean, A. E. White, C. B. Townsend and H. B. Jennings (secretary-treasurer of the company named) have been appointed a committee to solicit subscriptions. This enterprise will probably be capitalized at \$100,000.

The second new company is being promoted by stockholders in the First National Bank, and is to have a capital stock of \$125,000. A considerable part of the amount has been subscribed, and definite announcements as to organization will soon be made. Those interested include Messrs. Geo. B. McLeod, H. M. McAllister, W. P. Barker and others.

#### The Magnet Knitting Mills.

In addition to the facts stated last week as to the Magnet Knitting Mills of Clinton, Tenn., it may be added that the company's daily capacity will be 200 dozen pairs of cotton, lisle and silk seamless hose in all grades. About 60 operatives will be employed. The company has purchased all its machinery except 100 horse-power boiler, 60-horse-power engine, power and transmission appliances, elevator, water tank, steam and water pipes and electrical supplies for lighting. It is in the market for this equipment. The Magnet Knitting Mills is a \$30,000 enterprise, and Paul F. Vogel is manager.

#### The American China Silk Co.

The American China Silk Co. of Oklahoma City, O. T., has been incorporated with a capital stock of \$1,000,000 for manufacturing silk goods, but no details regarding the company's plans have been announced. Its incorporators are Messrs. J. H. Stepher of St. Louis, Mo.; Henry J. Donneboun of Houston, Texas; Paul A. Shuler, Mamie D. Herskowitz and A. S. Erigelman of Oklahoma City. (It was recently reported that the American China Silk Co. was negotiating with the Monroe (La.) Progressive League relative to locating plant, and probably this is the enterprise.)

#### A Third Mill Proposed.

The directors of the Clover Cotton Manufacturing Co. of Clover, S. C., are considering the erection of a third mill. They have called a meeting of the stockholders to be held on April 17 to vote on the proposition, and it is stated that the decision will doubtless be affirmative. In this new mill it is proposed to install 10,000 spindles, which would mean a \$150,000 plant, for manufacturing combed and carded hosiery yarns from Egyptian cotton. The two Clover mills now in operation have a total of 15,000 ring spindles.

#### Wah Ree Knitting Mills.

Two weeks ago the MANUFACTURERS' RECORD stated that Henry A. Gilliam and associates of Tarboro, N. C., proposed to organize the Wah Ree Knitting Mills. Last week they chartered the company, incorporation papers being granted to Mr. Gilliam, George W. Holderness, C. W. Jeffreys, Henry Bryan and a number of others. The capital stock is \$100,000. A plant for manufacturing hosiery will be erected, and consideration is now being given to the details.

#### The Hanna Pickett Mills.

The incorporators of the Hanna Pickett Mills, recently reported, have elected Robert L. Steele, president; Wm. B. Cole, treasurer, and the following directors: Messrs. John B. Shaw, Z. F. Long, H. C. Dockery, H. C. Watson, M. F. Fowlkes, F. J. Garrett, H. F. Steele and Wm. B. Cole. As previously stated, this company has a capital stock of \$200,000, and contemplates building a mill of 10,000 spindles and 300 looms. This enterprise is at Rockingham, N. C.

#### The Nashville Hosiery Mills.

Messrs. Jesse H. Thomas, J. P. McPhail, J. H. Criddle, J. A. Bishop and Jesse P. Loving have incorporated the Nashville Hosiery Mills Co. of Nashville, Tenn., with capital stock of \$125,000. They own an established plant which it is proposed to enlarge under the new corporation.

#### Cotton-Waste Contract.

The Rhode Island Company of Spray, N. C., will award contract within 10 days for waste, including cotton notes, sweeps, thread waste, etc.

#### Textile Notes.

The Leaksville Woolen Mills, Leaksville, N. C., has installed two sets of woolen cards and 12 blanket looms.

The Commercial Club of Fort Smith, Ark., is negotiating with capitalists relative to building a \$350,000 cotton mill at Fort Smith.

The Board of Trade, Florence, S. C., is considering a proposition from an experienced mill man for organizing a \$100,000 cotton-mill company.

It is reported that C. C. Vaughn of Winston, N. C., will organize a stock company with capital of \$25,000 to build a mill for knitting ladies' underwear at Statesville, N. C.

Messrs. Eugene Morrison and J. A. Bradford of Statesville, N. C., propose to establish a knitting mill. They will organize a stock company with capital of \$25,000 and privilege of increasing to \$100,000.

Messrs. S. L. Nelson of Corinth, Miss.; Morris Hoffman, Morris Rosenthal and J. L. Carleton of St. Louis, Mo., and others have incorporated the Corinth Woolen Mills with capital stock of \$225,000.

It is reported that C. M. Black of Kingston, N. C., is interested in plans for organizing company to build a 5000-spindle cotton mill in Mt. Olive, N. C. A plant of this equipment represents a capital stock of from \$80,000 to \$100,000.

It is reported that the Covington (Ga.) Mills has completed the erection of an additional building, providing space for 5000 spindles, which have been ordered. This company has been operating an equipment of 13,300 spindles and 32 looms.

#### Cotton-Oil Meetings.

Cottonseed-oil men are taking more than usual interest in plans for the meetings of the Interstate Cottonseed Crushers' Association at Atlanta, Ga., May 15, 16 and 17, of the National Oil Mill Superintendents' Association at Dallas, Texas, June 6, 7 and 8, and of the Texas Cottonseed Crushers' Association, Galveston, Texas, June 18, 19 and 20.

The Pittsburgh Foundrymen's Association will entertain next Monday the New England and the Philadelphia Foundrymen's associations, the entertainment including a visit to the plants of the Westinghouse Machine Co. and the Carnegie Steel Co.

## MINING

### Coal Operations.

The stockholders of the Green River Coal & Mining Co. of Parkersburg, W. Va., mention of which was made in this column two weeks ago, have elected the following officers and directors: Messrs. C. H. Shattuck, president; Lysander Dudley, vice-president; J. W. Dudley, Jr., secretary; J. H. Grogg, treasurer; H. H. Moss, Reese Blizzard, J. M. Dare, Gordon C. Enoch, B. D. Stout, W. F. Harvey, A. D. James, W. U. Grider, E. M. Gilkeson, E. L. Morgan and W. H. Wolfe.

The company holds options on coal property in Ohio and Muhlenberg counties, Kentucky, and after an investigation by a committee appointed for the purpose, which will make an inspection trip on April 11, action will be taken as to whether the property will be purchased. The tract is located on the Green river in Kentucky and on the lines of the Louisville & Nashville and Illinois Central railroads. If negotiations are closed for its purchase arrangements will be made to develop daily output of 10,000 tons of coal. The capital stock of the Green River Coal & Mining Co. is \$1,500,000.

The Dominion Coal Co., Burke H. Keeney of Middlesborough, Ky., secretary and general manager, complete organization of which was reported in this column last week, has begun the installation of a mining plant on its property in Lee county, Virginia, to cost \$50,000. Electrical hauling and cutting machinery, together with other laboring devices for the practical and economic operation of the mine, will be installed. It is proposed to develop a capacity of 800 tons per day.

The Kansas City Coal & Development Co. of Kansas City, Mo., recently incorporated with a capital stock of \$100,000, owns about 25,000 acres of undeveloped coal lands in Virginia near the line of the Norfolk & Western Railroad, which is said to contain the Pocahontas seam. As yet no development work has been done on the property with the exception of opening a few veins of coal, but it is the intention of the company to begin operations within the next six months. Officers of the Kansas City Coal & Development Co. are Messrs. R. A. Moore, president; D. P. Gray, secretary, and W. F. Nine, assistant secretary.

The Blocker Coal & Land Co., with general offices at Fort Smith, Ark., and branch office and mines at Blocker, I. T., has recently been organized with a capital stock of \$100,000 for the purpose of operating the mines at Blocker. The company controls what is said to be some of the best coal properties in the Indian Territory, producing a very high grade of coal, and has a warranty deed to the townsite. Operations are at present being conducted on strip land, but options have been secured on mine property also. Present equipment, including tracks, tippie, townsite, etc., is valued at \$25,000. Officers of the Blocker Coal & Land Co. are Messrs. T. J. Wright, president; W. F. Blocker, vice-president; A. N. Sicar, treasurer, and A. H. Ritter, secretary. Mr. H. L. Rogers is manager of the mine.

President C. J. Wittenberg of the Chesapeake & Ohio Coal Co., 11 Broadway, New York, with several associates, has formed a soft-coal combination in the New River coal fields of West Virginia. The combination will have a capital stock of \$8,000,000 and will be known as the New River Collieries Co. The company, it is understood, will acquire control of approximately 30,000 acres of coal land, and that the first year's output will amount to 2,000,000 tons. The companies acquired are now operating mines. Messrs. C. J. Wittenberg and A. M. Wittenberg will be

president and secretary-treasurer, respectively, of the new company. It is announced that terminals will be obtained at Newport News, Va., and practically all the coal will be brought to tidewater over the Tidewater Railway. The company owns small branch railroads connecting its lines.

### Southern Iron Ores.

The iron ores of Alabama will receive the special attention of the United States Geological Survey during the coming field season. The work of investigation will be carried on under the direction of Mr. Edwin C. Eckel, who spent considerable time last year in Northern Alabama studying the iron ores in the district between Chattanooga and Attalla and Gadsden.

The gray or magnetic iron ores in the district south of Talladega will be investigated by Dr. P. S. Smith, a geologist who has lately become attached to the staff of the federal survey. Within the past few years a great deal of interest has been shown in the ores of this district. They are said to be magnetites of a very high grade, suitable for reduction by the Bessemer process. A thorough investigation will be made and the results embodied in a complete report.

A study of the iron ores of the Birmingham district will be taken up about May 1 by Mr. Eckel. The district will be mapped in detail, and the origin of the ores carefully worked out. A report on the iron ores and the iron industry of the Birmingham district will probably be published before the close of the year.

An investigation of the iron ores of Virginia, which was begun last year in co-operation with the Virginia geological survey, will probably be completed this summer. The field work on Oriskany and Clinton ores was done by Mr. Eckel, that on the New River-Cripple Creek brown ores by Mr. R. J. Holden of the Virginia survey.

The iron ores of Virginia have been divided into six groups. Detailed field work was done on the ores of two groups of brown hematites ("Oriskany ores"), one comprising the Goshen-Longdale-Lowmoor-Oriskany district, mostly in Augusta, Bath, Boutetourt, Allegheny and Craig counties, the other group comprising the brown hematites of New River-Cripple Creek district, mostly in Wythe and Pulaski counties. The red hematites—known as "Clinton ores," "fossil ores," "oolitic ores"—of the foothills of the Allegheny mountains were examined in less detail. No work was done on ores of the other three groups—that is, the magnetites and specular hematites of the Blue Ridge and Piedmont districts, the brown hematites of the New River-Cripple Creek district, and the brown hematites ("gossan ores") of Carroll and Floyd counties. It is planned to take up in 1906 the examination of the ore deposits not visited during 1905.

### Arkansas Coals.

The United States Geological Survey will this year prepare a map of the carboniferous coal field of Arkansas. Mr. Arthur J. Collier, who will be assisted by Messrs. Carl D. Smith and Sidney Paige, left Washington March 1 to make a survey of the field. It has been found that the old maps of this region are inadequate, and the present conditions and prospects justify its detailed survey.

The coal of this area is of a higher grade than any mined west of the Mississippi. Practically the whole of the Arkansas coal product—2,009,451 short tons in 1904—comes from this field. About one-half this product is classed as semianthracite, which burns with a short, hot, smokeless flame, similar to that of anthracite. Unlike anthracite, however, this coal is



easily broken up, and in mining and handling makes a large amount (about 30 per cent.) of slack or fine coal, the greater part of which is wasted or sold at prices below the cost of production. The entire product is consumed at present by Kansas City packers.

Tests of this coal made at the experiment station maintained by the United States Geological Survey at the Louisiana Purchase Exposition in St. Louis show that it has much greater prospective value, for it was briquetted with great success. So high grade is it that briquetting would pay, even if the process cost as much as \$1 a ton. Carload lots of briquettes made from this coal were tested last year with excellent results in locomotives of the Missouri Pacific Coal Co. Tests made this year are even more favorable. They show that this fuel, which is practically smokeless, is an excellent substitute for anthracite, and is adapted for both steaming and domestic use.

#### Big Coal Business.

The annual meeting of the stockholders of the Consolidation Coal Co. of Baltimore, Md., and its allied companies, including the Fairmont Coal Co. and the Clarksburg Fuel Co., both of West Virginia, and the Somerset Coal Co. and the Pittsburg & Fairmont Fuel Co. of Pennsylvania, was held at the offices of the company in the Continental Trust Building, Baltimore, last week. Reports of the companies for 1905 were submitted and approved, the reports showing that during the year coal mined by the Consolidation Coal Co. amounted to 2,006,213 tons; by the Somerset Coal Co., 1,352,539 tons, with a production of 50,183 tons of coke; the Fairmont Coal Co., 3,748,230 tons, with 106,085 tons of coke and 10,955 tons of crushed coke; Clarksburg Fuel Co., 564,918 tons, and the Pittsburg & Fairmont Fuel Co., 371,064 tons. Mr. C. W. Watson was re-elected president of the several companies by a direct vote of the stockholders.

#### The Catocin Property.

Some days ago it was announced that the sale of the Catocin Furnace Co.'s properties at Catocin Furnace, Md., to Joseph E. Thropp of Everett, Pa., had been confirmed. It can be stated that Mr. Thropp's plans for utilizing the property are as yet very general, but it is expected that the iron-ore mine will soon be shipping its output of 150 to 200 tons of washed ore daily to Mr. Thropp's iron furnace at Earlston, Pa. There are no other details that can be stated at this time.

#### Opening Coal Mines.

The New River-Kanawha Fuel Co. of Charleston, W. Va., has been incorporated with Messrs. M. T. Roach, president; E. P. Mucklow, secretary-treasurer, and R. H. Richardson, general manager and auditor. The company now owns 21 mines with a daily capacity of 10,000 tons, and will open 8 or 10 additional mines in the near future.

#### Virginia Pipe & Foundry Co.

The Virginia Pipe & Foundry Co., Belle Isle, Richmond, Va., has awarded contract to the McClintic-Marshall Construction Co. of Pottstown, Pa., for the erection of a steel building 150 feet long by 125 feet wide, which is expected to be completed and equipped with machinery by May 1. This equipment will be for the manufacture of cast-iron soil pipe and plumbers' supplies. The Virginia Company has organized with a capital stock of \$50,000, and its officers are Thomas S. Wheelwright, president; C. Manning, Jr., vice-president, and H. R. Wayt, secretary-treasurer.

## LUMBER

[A complete record of new mills and building operations in the South will be found in the Construction Department.]

### HARDWOOD AT MEMPHIS.

Developments in the Trade at That Important Center.

[Special Cor. Manufacturers' Record.]  
Memphis, Tenn., March 24.

In addition to the very active construction work going on in Memphis at this season, an activity in that regard which is unprecedented, large transactions and influences are at work in other channels of trade here, among them the timber business, with its branches, the lumber, cooperage, furniture and box trade as developed here, the cottonseed-products interests and the banking interests. All of these have seen noteworthy developments within the fortnight.

The lumber market at Memphis has come to be known as the largest hardwood-producing market in the world. The export branch of the trade yields a large influence on market conditions here. Two and three months ago business was quite stagnant in export circles, but it has now picked up, and is fairly satisfactory. In turn the domestic business has grown active. The construction work several times alluded to has made retail business active. The retail lumbermen here have their association, the Retail Lumber Dealers' Association. As V. R. Smith, secretary of this body, said to the writer, their work lies along conservative lines, they disseminate information of actual trade conditions, make suggestions, but do not attempt to coerce. They are in this way exercising a potent influence. The hardwood lumbermen have their own organization: this is the Lumbermen's Club, started five or six years ago with less than a dozen members; it now has in the neighborhood of 100 representatives of large firms on its rolls. W. R. Barksdale is president of this body, and Geo. C. Ehemann is secretary. The club exerts much influence on methods of the market, on traffic matters and in the general commercial life of the city. It is about the most active lumber club on the American continent, as distinct from an association. The Cincinnati Club at one time had great prestige, but perhaps the Memphis body is more important now. The Chicago exchange and the St. Louis organization are creditable, but they do not discount Memphis' organization. Just now the club is very actively identified with the forthcoming entertainment of the National Hardwood Lumber Association, which meets here in annual session May 3-4. From 400 to 500 lumber dealers and manufacturers from all over the United States will be in attendance.

The International Slack Cooperage Manufacturers' Association meets here April 2-3. This organization will discuss some of the chaotic and unsatisfactory price conditions that exist in a trade that at former times has been most prosperous in this district. The hoop branch of the business holds its own, but staves have been very indifferent in value when the cost of production is considered. The association will perhaps establish a regular office in Memphis, which will be in charge of the secretary.

Of the hardwoods sold here, it seems that both low-grade and high-grade lumber are in good request. Plain oak and ash lead in the market, but quartered white and red oak, cypress, cottonwood and gum are very active. Very little poplar is sold here as compared with the other woods and as compared with the sales in other markets. The hardwood flooring interests are suddenly being developed here by the institution of opera-

tions and two well-equipped factories, one in North Memphis and one in South Memphis. Much of this product goes to the West, but is shipped all over the country. The furniture and casket factories here report a large business in the Southwest. The tight cooperage interests, stave, heading and barrel makers are having satisfactory market conditions. A rise in the Mississippi, Wolf and Hatchie rivers is contributing to the bringing into market of logs that are much needed. The roads are fair for the season, really better than usual for this period of the year, and the mills are thus enabled to cut lumber which, while not shipping dry, can with the kiln systems be quickly made merchantable, and seem to point out that relief for the much reduced stocks is practically at hand, even though no price reductions are probable at an early date. Timber is very high. Two noteworthy transactions have been made in this immediate district of Tennessee within the last fortnight, but large bodies are not being handled often.

The cottonseed-products interests here report a practical cessation of the season's business. The mills have mostly closed down; very little product is on hand, and that is held at high figures. The export interests, that were for a long time phenomenally active, offering high prices, have ceased. Feeders have gone to pasture or other feeds. The low cottonseed yield caused a very rapid movement this season, which was only helped by speculative tendencies that ran the price up. The coming season will see a large cottonseed-products business in this leading market, no doubt.

#### Pulp Wood in 1905.

Statistics of forest products gathered by the forest service for the past year furnished the basis for a provisional statement of the wood consumed in the manufacture of paper pulp. Returns from 159 firms, controlling 232 pulp mills, show that over 3,000,000 cords of wood were used as follows: Domestic spruce, 1,564,000 cords; imported spruce, 614,000 cords; domestic poplar, 274,000 cords; imported poplar, 22,000 cords; hemlock, 370,000 cords; pine, 57,000 cords; balsam, 22,000 cords; miscellaneous, 93,000 cords. Of the wood consumed, division was made among the various processes as follows: Sulphite, 1,538,000 cords; soda, 410,000 cords; ground wood, 1,068,000 cords. The total pulp production by all processes by the firms reporting was 1,903,000 tons. According to the census of 1900, the consumption of pulp wood was 1,986,310 cords, showing that in the six past years there has been an increase in consumption of over 50 per cent., which demonstrates in a striking manner the drain upon the forests caused by the pulp industry. The forest service will issue as soon as possible a final and detailed statement of the kind and quantity of wood used for pulp in the various States.

#### To Locate Stave Mills.

Dispatches from Owingsville, Ky., state that Messrs. W. J. Fell & Co. of Salt Lick, Ky., have purchased from W. H. Wells the oak timber on 700 acres of land in Morgan county for a consideration approximating \$5000. Messrs. W. J. Fell & Co. will at once erect three stave mills on the property to facilitate the timber development, and others will be established if required.

#### Carriage and Wagon Makers.

At a meeting of the Nashville (Tenn.) Carriage and Wagon Makers' Association last week the subject discussed was the necessity for co-operation. The meeting was presided over by J. L. Vogely, presi-

dent, and J. J. Todd as secretary. Mr. J. H. Jamison led a discussion on the unity of purpose of the Nashville carriage and wagon makers, stating that the local business aggregated between \$250,000 and \$300,000 a year, but because of lack of co-operation the business is not profitable. Others taking part in the discussion were Messrs. Gus Waller, J. J. Todd and J. H. Matthews.

#### Of Interest to Southern Mills.

One of the well-known car manufacturers is desirous of corresponding with some of the leading long-leaf yellow-pine manufacturers in Alabama, Louisiana, Mississippi or any other long-leaf yellow-pine districts. This correspondence is contemplated in connection with the car company's requirements for car siding. Southern manufacturers will probably find it to their advantage to investigate this by addressing the Ralston Steel Car Co., First National Bank Building, Columbus, Ohio.

#### Pine Shingles Wanted.

The Rhode Island Company of Spray, N. C., is in the market for No. 2 pine shingles in large quantities, and invites prices delivered.

#### Lumber Notes.

The National Coopers' Association held its eighth annual convention in St. Louis, Mo., last week, with President A. S. Ray of Chicago presiding.

Dr. W. F. Baylis, C. M. Baylis, Andy Keen, Will Roberts and Dave Lee have organized the Yellow Pine & Hardwood Lumber Co. of Estabatchie, Miss., and will establish a lumber plant, to be in operation by May 1. It is stated that the company has timber enough to keep its plant in operation for seven or eight years.

## PHOSPHATES

### To Erect Fertilizer Plant.

The Jefferson Fertilizer Co. of Birmingham, Ala., reported last week as incorporating with a capital stock of \$250,000, will erect a fertilizer plant to cost \$150,000. The plant will include an acid plant and fertilizer buildings for the manufacture of sulphuric acid, acid phosphate and complete fertilizers. It will be furnished and erected by the N. P. Pratt Laboratory of Atlanta, Ga. Officers of the Jefferson Fertilizer Co. are Messrs. J. G. Whitfield, president; J. W. Donnelly, vice-president; Henry B. Gray, secretary and treasurer.

#### Phosphate and Fertilizer Notes.

Messrs. Harry L. Pierce and H. G. Lowe have incorporated the Pierce Phosphate Co. of Savannah, Ga., with a capital stock of \$300,000.

During February 13,876 tons of Florida phosphate rock were shipped through Savannah, Ga., to Bremen, Hamburg, Rotterdam and Karstrup.

The Planters' Fertilizer & Phosphate Co. of Charleston, S. C., has been incorporated with a capital stock of \$350,000. Messrs. F. W. Wagner, W. H. Welsh, Otto Tiedmann, John A. Hertz and associates are reported as the incorporators.

#### A \$75,000 Glass Plant.

A plant for the manufacture of window glass will be established at Grafton, W. Va. This enterprise will be opened by the Grafton Window Glass Co., which has been incorporated with a capital stock of \$75,000 and elected the following officers: H. C. Compton, president; Geo. W. Lowther, secretary; A. H. Phillips, treasurer, each of Grafton, and H. M. Lewis of Morgantown, W. Va., vice-president. The new company will erect a 36-blower tank plant, and correspondence is invited from supply houses.

## MECHANICAL

### Sturtevant Vertical Engine.

The Sturtevant Vertical Engine of class VS5 is high speed and automatic. A system of forced lubrication and the complete enclosure of the moving parts provide for continuous operation for weeks at a time without attention and insure perfect reliability even in the hands of the

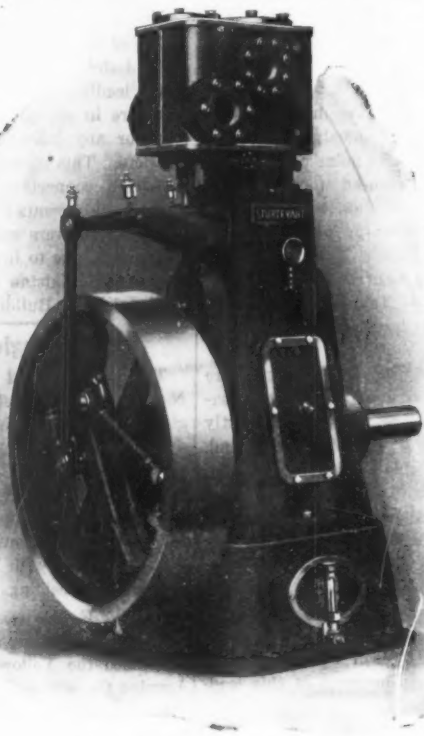
a part of the enclosing frame which protects the parts from dirt and accident, insures economy and eliminates the necessity of frequent attention; but the removable oil-tight plates or covers make the parts as accessible as in the open type of engine.

The cylinder, with which is cast the valve chamber, is provided with relief valves, which, by opening automatically at any predetermined pressure, prevent

leakage without unduly increasing friction, the cast-iron packing rings are turned to a perfect contact.

Open-hearth steel is the material from which are forged the piston rod, connecting rod and crankshaft, each from a single piece. The composition boxes of the connecting rod are lined with Sturtevant white metal hammered in and accurately bored; the cast-iron crosshead is equipped with adjustable shoes and a nickel-steel wristpin, and the crankpin is of such unusually large size that it cannot heat, for the intensity of pressure is always low and the lubrication ample and positive.

In the construction of these engines only the highest grade of workmanship, finish and material is allowed. The parts, which are interchangeable throughout, are made to gauge and template, ground or scraped to surface plate wherever such accuracy is desirable. Exposed surfaces, such as cylinder head, steam-chest cover, rim and face of flywheel, are highly polished, other parts being filled, rubbed down and painted. This engine is manufactured by the B. F. Sturtevant Company of Boston, Mass. It is illustrated herewith.



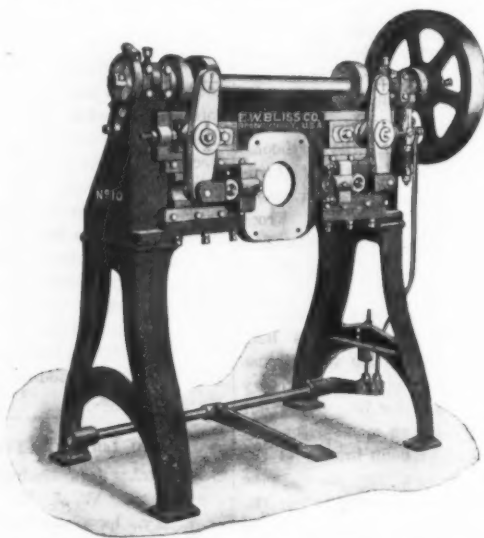
STURTEVANT VERTICAL ENGINE.

unskilled. This type of engine is adapted to all classes of work requiring maximum power in minimum space—a condition attained by operation at the high speed made possible by the refined design, the high-grade construction and the use of the best material. They are especially designed for the driving of direct-connected generators. Because of the large diameter and short stroke, the engines develop great power and high rotative speed without excessive piston travel.

Within the heavy cast-iron base, to which is bolted the lower part of the frame, a submerged oil pump, operated by the crankshaft, draws oil from the reservoir and forces it through pipes and internal passages in the moving parts to the crankpin, the wristpin and the main bearings. Twice during each revolution the reversal of stress on these parts, due to the double-acting feature of the engine, so reduces the pressure that the pump has an excellent opportunity to force between the surfaces a fresh film of oil, which is carried around to lubricate the rotating parts when the pressure is greater. The pressure of 10 to 20 pounds per square inch positively maintains this film of oil, preventing actual contact of metal, reducing wear and friction to a minimum, and insuring a mechanical efficiency of over 90 per cent. Centrifugal oil guards located on the shaft just where it passes through the casing, together with the enclosing frame and the water-shed partition, insure perfect cleanliness and absolutely prevent the escape of the oil, which is continuously repumped to the bearings.

The water-shed partition, a valuable and distinctive feature, prevents water from the piston-rod stuffing-box mixing with the lubricating oil in the case, and at the same time makes impossible the passage of oil from the enclosing frame to the interior of the cylinder. The piston-rod stuffing-box may be readily adjusted without opening the case. This water-shed partition forms

possible damage by water. A planished sheet-iron cylinder casing enclosing a thick layer of asbestos greatly reduces condensation. This lagging need not be disturbed, for the cylinder is tapped for the indicator. The flow of steam to and from the cylinder is controlled by a perfectly-balanced piston valve possessing the simplicity of the plain slide valve, but requiring the minimum of power to operate. The snap rings on this valve insure tightness, and the



BLISS SPECIAL TWO-SLIDE PUNCHING PRESS.

bushing in which it moves may be easily replaced when worn. A Rites governor, placed within the heavy flywheel, gives motion to the valve through the medium of a rocker, and alters the cut-off by changing the valve travel, permitting only 1½ per cent. variation in speed between no load and full load. The hollow cast-iron piston, strengthened by internal ribs, is fastened to the piston rod by a forced taper fit, secured by a nut. To prevent

and makes from 100 to 150 revolutions per minute. The total weight of the press complete as shown, exclusive of the dies, is 800 pounds.

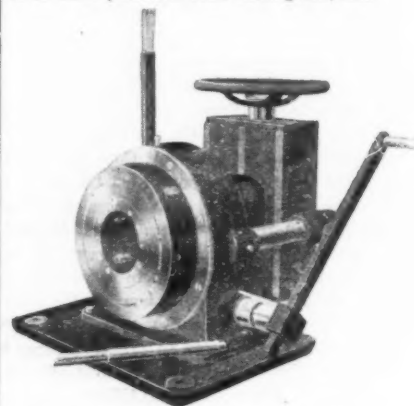
This machine is built by the E. W. Bliss Company, No. 137 Plymouth street, Brooklyn, N. Y. The company also makes a machine similar to the one shown, but adapted for foot power. This latter press consists of what may be called two horizontal foot presses controlled by one lever.

### "Loew Victor" Pipe Machine.

Those who have occasion to use a pipe machine will find of interest the accompanying illustration of the "Loew Victor" type and its description by the Loew Supply & Manufacturing Co., 30 Cortlandt street, New York. This company manufactures the machine. It says:

"This machine is the result of wide experience in the use and manufacture of pipe-threading machinery, combining, with its manifest individual advantages, all the valuable principles and recent improvements in machinery of this kind with a view to the saving of labor and time. It is solidly constructed of the very best materials and workmanship designed to resist rough usage, and notwithstanding its solidity and strength, it is so light as to be conveniently portable and requiring little space.

"Power is transmitted by a double-lead worm-gear set close to the base of the machine, the worm-gear having been found to be more powerful than bevel gears, and



"LOEW VICTOR" PIPE MACHINE.

by using a double-lead worm-gear the speed maintained is the same as if bevel gears were used.

"Sizes 2 and 3 are equipped with two outside gear wheels, which are encased in a guard, giving the machine two speeds, viz., high speed for the smaller sizes of pipe and low speed for the larger sizes.

"For power purposes a direct-connected three-step pulley and shaft are furnished, also a countershaft carrying a three-step pulley.

"The dies, which consist of four pieces, are made of high-grade die steel, and when dull can be reground by the plumber, which is a great advantage, as it saves the time required to return to factory. The grinding does not change the shape of the cutting face of the dies.

"Another important feature in connection with the dies in the machine is that during the operation of cutting the thread the pressure of the pipe against them prevents slipping. Some pipe machines require some device to lock the head in order to prevent the dies from slipping after the operation of threading a piece of pipe begins.

"No levers or locking devices, which are awkward and ungainly, are on the head, and there are no projections on the faceplate. The faceplate adjusts the dies, which engage in a continuous scroll on back of plate. The plate is self-locking, requiring no bolts to lock the dies when adjusted to the desired size. Each machine is supplied with oil pan and tripod.

"The vise is a universal, self-centering vise, with two long-bearing jaws made of tool steel. The pipe is clamped in the vise by a wheel which is of sufficient size to insure the pipe's being perfectly rigid in the jaws when set."

The Rock Hill (S. C.) Commercial Club has elected Messrs. John G. Anderson, president; F. C. Whitner and Ward Albertson, vice-presidents, and C. K. Schwarr, secretary.



# Construction Department

## TO OUR READERS!

In order to understand and follow up properly the Construction Department items, please bear in mind the following statements:

### EXPLANATORY.

The MANUFACTURERS' RECORD seeks to verify every item reported in its Construction Department by a full investigation and complete correspondence with everyone interested. But it is often impossible to do this before the item must be printed, or else lose its value as news. In such cases the statements are always made as "rumored" or "reported," and not as positive items of news. If our readers will note these points they will see the necessity of the discrimination, and they will avoid accepting as a certainty matters that we explicitly state are "reports" or "rumors" only. We are always glad to have our attention called to any errors that may occur.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

In correspondence relating to matters reported in this paper, it will be of advantage to all concerned if it is stated that the information was gained from the MANUFACTURERS' RECORD.

### ADDRESS FULLY.

To insure prompt delivery of communications about items reported in these columns, the name of one or more incorporators of a newly incorporated enterprise should be shown on the letter addressed to that town, or to the town of the individual sought, as may be shown in the item, as sometimes a communication merely addressed in the corporate or official name of a newly established company or enterprise cannot be delivered by the postmaster. This will help to insure prompt delivery of your communication, although it is inevitable that some failures on the part of the postal authorities to deliver mail to new concerns will occur.

### WRITE DIRECTLY.

It is suggested to advertisers and readers that in communicating with individuals and firms reported in these columns, a letter written specifically about the matter reported is likely to receive quicker and surer attention than a mere circular.

## ALABAMA.

Anniston—Grain and Feed Company.—Miller Grain & Feed Co. has been incorporated with \$3000 capital stock by R. W. Miller, Pauline Miller and C. M. Woodruff.

Anniston—Lead and Zinc Mines.—Joplin (Mo.) parties have secured options on lead and zinc properties near Anniston from J. H. Mountain, 1208 Noble street, Anniston, and will probably arrange for developing same.

Bessemer—Iron-pipe Works.—It is understood that the United States Cast-Iron Pipe & Foundry Co. is proceeding with enlargements which had previously been begun, but were temporarily suspended. These betterments include a 150-foot extension to the main building, providing space for an additional pit, the erection of three modern core-drying furnaces, the installation of large traveling cranes, etc., at a cost of about \$100,000. Contracts for the new machinery required are reported as awarded; general offices, 89 Broadway, New York.

Bigbee—Mill Company.—Tyler Creek Mill Co. has been incorporated with \$20,000 capital stock by W. D. Jansen and associates.

Birmingham—Carriage Factory.—P. P. Hunter and E. D. Taylor, proprietors Taylor Carriage Co., operating two stores, contemplate establishing plant for the manufacture of carriages.

Birmingham—Acid Plant and Fertilizer Factory.—Jefferson Fertilizer Co., reported incorporated last week with \$250,000 capital stock, will establish plant for manufacturing sulphuric acid, acid phosphate and fertilizers. About \$150,000 will be expended. Contract for complete plant has been let to N. P. Pratt Laboratory, Atlanta, Ga. J. G. Whitfield is president of the company.

Dothan—Variety Works.—Chartered: Dothan Variety Works & Supply Co., with \$10,000 capital stock, by W. C. Pilcher, R. B. Pilcher and others.

Enterprise—Ice Factory.—T. L. Edwards, W. J. Brunson, C. E. Harrison and others are organizing company to establish ice factory.

Fackler—Cottonseed-oil Mill.—It is proposed to establish a cottonseed-oil mill, and G. F. Mathis and Matt Hammon are promoting the enterprise.

Faunsdale—Land Improvement.—Minge Land & Development Co. has been organized with \$200,000 capital stock for development purposes. J. H. Minge is president, and J. C. Minge, vice-president, secretary and treasurer.

Finchburg—Mill Company.—W. H. Louissell, Cyril Louissell, J. T. McKeen and associates have incorporated the Flat Creek Mill Co. with \$200,000 capital stock.

Gadsden—Brick Works.—L. D. Morris and C. C. Morris of Atlanta, Ga., are reported as to establish \$50,000 brick plant at Lock 3.

Gadsden—Electric-light and Gas Plants.—Gadsden Railway, Light & Power Co. has been incorporated with \$5000 capital stock. Geo. H. Schuler of Birmingham, Ala., is president, and E. T. Schuler, secretary-treasurer.

Huntsville—Cotton Mill.—Abingdon Cotton Mills has been incorporated with capital stock of \$216,000 and J. L. Hand of Pelham, Ga., president; Wm. L. Barrell, Lawrence, Mass., vice-president, and T. W. Pratt, Huntsville, secretary-treasurer. This company takes over the Madison Manufacturing Co., referred to last week, and will expend from \$30,000 to \$50,000 for improvements, possibly adding 5000 spindles; present equipment 15,000 spindles and 525 looms.

Luverne—Land Improvement.—Excelsior Land & Improvement Co. has been incorporated with \$50,000 capital stock for making improvements to town. It is proposed to build 10 brick and cement-stone buildings, one 25-room hotel and opera-house, all with cement-tile floors. The installation of water-works is also being considered. J. Lee Holloway is president; Felix Folmar, vice-president, and George A. Folmar, secretary-treasurer; main office, Montgomery, Ala.\*

Pell City—Cannery.—Pell City Canning Co. has been organized for the establishment of cannery having a daily capacity of 10,000 cans.

Sheffield—Iron Furnace.—It is reported that the Sloss-Sheffield Steel & Iron Co. has purchased the North Alabama Furnace Co., including the Lady Ensley furnace, having an annual capacity of 70,000 tons of foundry and mill pig-iron, and arrangements will be made at once for putting it in blast; general offices, Birmingham, Ala.; New York office, 28 Nassau street.

Tuscaloosa—Lumber Company.—Tuscaloosa Lumber Co. has been incorporated with \$50,000 capital stock by A. E. Swanson of Curtis, Ala.; J. G. Curtis, A. H. Peterson, both of Ludlow, Pa.; D. G. Curtis of Erie, Pa., and S. G. Carkhuff of Union City, Pa.

Vinegar Bend—Shingle and Lath Mill.—Southern Shingle and Lath Mills, F. W. Green and W. R. Leon, proprietors, has begun the erection of proposed shingle and lath mill; to be two stories, 40x60 feet.

## ARKANSAS.

Eureka Springs—Electric-light Plant.—City has granted franchise to G. U. Matthews and C. M. Barnes to construct electric-light plant.

Fort Smith—Saw-mill and Handle Factory.—Lane-White Lumber Co., reported incorporated last week with \$100,000 capital stock, will erect saw-mill and handle factory.

Grant County—Timber Development.—Reports state that the M. B. Hutchinson Lumber Co. of Ottumwa, Iowa, has purchased 3000 acres of pine timber land in Grant county for development purposes, and will arrange at once to build saw-mill and tram-road.

Hot Springs—Street-paving.—Barber Asphalt Co., Chicago, Ill., has contract at \$2.11 per superficial yard for paving Central avenue.

Little Rock—Gas-plant Improvements.—Pulaski Gaslight Co. is reported to expend \$100,000 in improvements, laying 10 miles of new mains.

Russellville—Electric-light Plant.—City is reported as considering erecting electric-light plant. Address The Mayor.

Waldron—Telephone System.—Citizens' Telephone Co. has been incorporated with \$5000 capital stock by H. C. Stanton, W. A. Streator, William B. Thurman and associates.

Waldron—Lumber Company.—Incorporated: Ragon-Bates Lumber Co., with \$20,000 capital stock, by R. B. Ragan, S. K. Ingham, W. A. Beckett and others.

## DISTRICT OF COLUMBIA.

Washington—Brick Plant.—The National Ventilated Brick Co. has been incorporated with capital stock of \$100,000 to manufacture brick by James M. Bolton, George T. Parker, Colorado Building, 14th and G streets N. W.; Willis W. Parker, Colorado Building; B. P. Turner, 1101 13th street N. W., and Wm. E. Colburn, Colorado Building, 14th and G streets N. W.

## FLORIDA.

Berlin—Saw-mill.—Zuber-Sumner Lumber Co. has begun the erection of a saw-mill.

Jacksonville—Sewerage System.—Bryan & Co. have been awarded contract for constructing drain in Main street, as mentioned last week.

Key West—Ice and Cold-storage Plant.—It is proposed to establish ice and cold-storage plant. J. C. Meredith, Miami, Fla., can give information.

Live Oak—Sand-lime-brick Plant.—Live Oak Brick & Supply Co., recently reported incorporated with \$25,000 capital stock to establish sand-lime-brick plant, will erect brick building 50x100 feet with metal roof, equipping for a daily capacity of 10,000 bricks. G. W. Canfield, 22 Hogan street, Jacksonville, Fla., is engineer in charge. F. H. Bremer is manager.\*

Marianna—Public Improvements.—Town will issue \$25,000 of bonds for constructing electric-light plant and erecting school building. Address J. H. Carter.

Ocala—Saw-mill.—E. L. Moore of Valdosta, Ga., is reported as to erect saw-mill.

Ocala—Transportation Company.—A company has been organized with Charles V. Miller, president; F. J. O'Hara, vice-president, and James H. Howard, general manager, to operate a line of boats on the Ocklawaha river; capital stock \$30,000.

Sanford—Timber Lands.—It is reported that Smith, Musselwhite & Davis have purchased about 6000 acres of land near Sanford from the Florida Land & Colonization Co. It is stated that the larger portion will be turpentine and the remainder divided into five-acre tracts for trucking purposes.

Tallahassee—Timber Development.—Leon Lumber Co. has purchased a tract of pine-timber land for development. A saw-mill with a daily capacity of 40,000 to 50,000 feet will be erected.

## GEORGIA.

Acoworth—Water-works and Electric-light Plant.—J. B. McCrary, Atlanta, Ga., is engineer in charge of the construction of water-works and electric-light plant. E. W. Lennon is mayor.

Atlanta—Pin and Bracket Factory.—Blue Bros. of McMinnville, Tenn., have installed plant for manufacturing locust pins and oak brackets.

Atlanta—Pin and Bracket Factory.—A plant for the manufacture of locust pins and oak brackets has been installed by W. A. Vick of Liberty, Tenn.

Atlanta—Sewerage System.—It is reported that Dunn Bros. have contract at \$34.195 for constructing proposed sewerage system, and Sciple's Sons have contract at \$12,690 for furnishing pipe for entire year and 63½ cents per 100 pounds for cement; R. M. Clayton, city engineer.

Atlanta—Viaduct.—It is reported that Grant Wilkins of Atlanta, Ga., is lowest bidder at \$65,180 for constructing Section 1 of the Washington-street viaduct, and the Oliver Company, Knoxville, Tenn., lowest bidder at \$60,190 for Section 2.

Augusta—Carbonating Works.—Dixie Carbonating Co. has been incorporated with \$10,000 capital stock to establish carbonating works, succeeding the Augusta Brewing Co. A two-story building, 30x55 feet, will be erected. J. B. Schweers is president and treasurer, and W. C. Knuck, secretary.

Columbus—Levee Work.—Chambers Transfer Co. has contract at eight cents a cubic yard for building the Ocmulgee levee.

Columbus—Water-power-Electrical Plant.—Columbus Power Co. has filed a mortgage for \$4,000,000, and bonds aggregating \$1,250,000 will be issued immediately, the proceeds to be used in carrying out the company's plans for the development of water-power along the Chattahoochee river, previously mentioned at some length in this department. The Columbus Power Co. was recently chartered to consolidate the various water-powers along the Chattahoochee river, giving an aggregate of 75,000 horse-power to be transmitted by electricity. George J. Baldwin is president.

Covington—Cotton Mill.—It is reported that the Covington Mills has erected an addition and awarded contracts for 5000 more spindles; present equipment 13,300 spindles and 322 looms.

Girard—Distillery.—W. C. Campbell of Columbus, Ga., has purchased site on which to erect distillery; daily capacity 10 bushels.

Macon—Gas Mains.—It is reported that the Macon Gas Light & Water Co. will extend gas mains into East Macon, furnishing that portion of the city with light.

Macon—Townsite.—Southern Land & Improvement Co., reported incorporated last week with \$25,000 capital stock, will establish townsite in Talbot county, Georgia. Dwellings, store buildings, cotton warehouse 80x150 feet and school building will be erected. Artificial-stone blocks will be largely used. Plans and specifications are wanted from architects. C. S. Woods is president and general manager; R. P. Christian, vice-president, and J. E. P. Stevens, secretary-treasurer.\*

Milledgeville—Sewerage System.—City will let contract May 2 for constructing sanitary sewer system, mentioned last week; Julius A. Horne, mayor.\*

Savannah—Phosphate Plant.—Pierce Phosphate Co. has been incorporated with \$300,000 capital stock by Harry L. Pierce and H. G. Lowe.

Savannah—Ink Factory.—Southern Ink Co. has been incorporated with \$5000 capital stock by J. H. Estill, J. S. Sims, Henry Blum and associates to manufacture and deal in inks, etc.

Statenville—Saw and Planing Mills, Dry-kilns, etc.—A. G. Garbutt Lumber Co., reported incorporated last month with \$50,000 capital stock, will erect saw-mill, planing mill and dry-kilns; daily capacity 30,000 to 50,000 feet of yellow pine; main office, Valdosta, Ga.

Winder—Cotton Mill.—Reports state that the Winder Cotton Mill Co. will double its capital stock and enlarge its mill; present equipment 10,000 spindles and 350 looms.

## KENTUCKY.

Henderson—Tobacco Stemmy.—Arthur B. Jarvis, mentioned last week as to build tobacco stemmy, will erect three-story brick building, 60x150 feet, and equip for steam and air-drying tobacco; Banard Alves, architect; Charles E. Drieling, 839 Powell street, engineer in charge. About \$20,000 will be invested in building and equipment.\*

Knox County—Mineral and Timber Lands.—Reports state that G. H. Dime of Prestonsburg, Ky., has purchased 16,000 acres of oil, coal and timber lands in Knox county. It is stated that arrangements will be made at once to drill for the oil, and the coal and timber rights will be leased.

Morgan County—Stave Mills.—W. J. Fell & Co. of Salt Lick, Ky., it is reported, has purchased 700 acres of timber land in Morgan county. It is stated that three stave mills will be established.

Muhlenberg County—Coal Mines.—Green River Coal & Mining Co., reported incorporated recently, has secured option on coal lands in Muhlenberg and Ohio counties, which will probably be developed; daily output 10,000 tons. C. H. Shattuck is president; Lyander Dudley, vice-president; J. W. Dudley, Jr., secretary, and J. H. Grogg, treasurer; main office, Parkersburg, W. Va.

Paducah—Hosiery Mill.—Aycock Hosiery Co. is reported as proposing to double the capacity of its plant, the improvements contemplating the construction of an additional two-story brick building to cost \$7000 and the installation of additional machinery.

Paducah—Sewerage System.—City, it is reported, is having plans prepared for constructing a new sewer district; L. A. Washington, city engineer.

Pikeville—Coal Mines.—George T. Honaker, Josephine Honaker of Chicago, Ill.; J. T. Goodson and A. L. Goodson of Hallsville, W. Va., have incorporated the Edgewater Coal & Coke Co. with \$100,000 capital stock.

## LOUISIANA.

Arcadia—Lumber Company.—Arcadia Lumber Co. has been incorporated with \$50,000 capital stock by A. C. Ramsey, George R. Hogg, George H. Kendall and others.

Baton Rouge—Electric and Gas Plant.—It is reported that the Baton Rouge Electric & Gas Co. will rebuild entire plant if further franchises are secured from the city; F. Arbour, chief engineer.

Franklinton—Brick Works.—Brick Manufacturing & Construction Co., Ltd., has been incorporated with \$10,000 capital stock. S. H. Burris is president; H. B. Magee, vice-president; J. K. Johnson, secretary-treasurer, and C. Murphy, general manager.

Lake Providence—Cotton-oil Mill and Cotton Gin.—Lake Providence Cotton Oil Co., Ltd., has been incorporated with \$60,000 capital stock. W. P. Hayne is president; A. B. Sanders, vice-president, and W. F. Bell, secretary-treasurer.

Monroe—Steel Bridge.—Vicksburg, Shreveport & Pacific Railway has let contract to A. M. Blodgett, Kansas City, Mo., for rebuilding the steel superstructure of bridge over the Ouachita river at Monroe; also for remodeling the present masonry piers. The new spans will be for single track and are as follows: One 295-foot draw span, two 243-foot pin-connected spans, one 120-foot riveted span; total estimated cost \$190,000.

New Orleans—Oyster Cultivation and Canning.—Dixie Oyster Co. has been incorporated with \$20,000 capital stock for the cultivation of 500 acres of oyster beds in St. Bernard parish and the canning of oysters. Robert H. Cage is president; James Drew, vice-president; John J. Gidiere, secretary, and John M. Sherrouse, treasurer.

New Orleans—Telephone System.—Charles T. Stark of St. Louis, Mo., previously mentioned as applying for franchise to install an underground telephone system, will have associated with him Thomas W. Crouch, L. S. Mitchell, Philip Werlein and other St. Louis capitalists. If franchise is secured it is proposed to organize a company with \$2,000,000 capital stock with Mr. Crouch, president; Mr. Stark, vice-president; Mr. Werlein, secretary, and Mr. Mitchell, treasurer.

New Iberia—Electric-power Plant.—Bayou Teche Traction & Power Co. has been incorporated with \$1,500,000 capital stock. F. A. Augur is president; H. R. Fine, vice-president; J. T. White, secretary, and Ledoux E. Smith, treasurer.

New Orleans—Land Cultivation.—Elsinore Planting Co. has been incorporated with \$100,000 capital stock by A. Danziger and others.

#### MARYLAND.

Baltimore—Showcase and Fixture Factory.—The O'Keefe Showcase & Fixture Co. has been incorporated with capital stock of \$50,000 to manufacture showcases and fixtures by James W. O'Keefe, 2428 East Chase street; James D. Hughes, 3121 Elliott street; Milton B. Williams, 29 North Collington avenue; Samuel H. Roberts, 2322 Boston street; F. M. Rice, Edward P. Burke, Fletcher B. Speed, John E. Thursty and Wm. J. Garrett, Law Building, Courtland near Lexington street.

Baltimore—Plano Factory.—Wm. Knabe & Co., plano manufacturers, Mt. Royal and Maryland avenues, will erect one-story wood-working factory 83x96 feet at its plant at Eutaw and West streets. Building will be equipped with fire shutters and rolling doors. Henry S. Rippel, 7 Clay street, is estimating on construction; Dodge & Day, architects, Philadelphia, Pa.

Baltimore—Real Estate.—The Summit Land & Building Co. has been incorporated with capital stock of \$5000 to deal in real estate by Jonathan C. Rogers, Baltimore Sun, Calvert and Saratoga streets; Albert M. Stubbs, Edgar Ellis, Arthur E. Reinheimer and Frederick V. Reinheimer, 1744 Bank street.

Baltimore—Silverware Factory.—George F. Buchholz, president Old Virginia Antique Furniture Co., 305 North Howard street, will erect factory building on Franklin road, Calverton; three stories, 50x150 feet; boiler-house, one story, 17x20 feet; brick with stone trimmings; steel beams; slag roof; electric wiring and fixtures; sanitary plumbing; heating system. Morrow Bros., 212 Clay street; Edward D. Preston, Gunther Building, St. Paul and Fayette streets; Thomas L. Jones & Son, 410 West Saratoga street; James Farley, 207 North street; Frederick Wright & Co., National Marine Bank Building, Gay and Water streets; William Steele & Sons, 17 West Saratoga street, and John Hiltz & Son, 3 Clay street, are estimating on construction; Henry J. Tinley, architect, Hoffman Building, 11 East Lexington street. When completed the building will be occupied by the Higbie-Barbour Manufacturing Co., manufacturers of silver-plated ware, Brooklyn, N. Y.

Baltimore—Cigar Factory.—Wm. B. Skinner Company, northwest corner Lexington and Frederick streets, has been incorporated with capital stock of \$10,000 to manufacture cigars, tobaccos and snuffs by George B. Skinner, Albert Marburg, John Pleasants, Thornton Rollins and Charles B. Roberts, Jr.

Baltimore—Plumbers' and Steamfitters' Supplies.—The Central Metal & Supply Co., 611-615 East Lombard street, dealers in metals,

plumbers', steamfitters' and cannery's supplies, will increase its capital stock to \$100,000.

Baltimore—Foundry.—Stuart R. Carr Company, foundry, Essex and Montgomery streets, has awarded contract to J. H. Miller, 110 Dover street, for the construction of an addition to its foundry; one story, 42.8x92 feet; brick with stone trimmings; steel beams; slag roof; cost about \$6000; R. C. Sandlass, architect, 23 North Fulton avenue.

Baltimore—Shipbuilding.—The Skinner Shipbuilding & Dry-Dock Co., foot Cross street, has been incorporated with capital stock of \$800,000 to build ships of all kinds and operate dry-dock by Wm. L. Rawls, Henry M. Marshall, Wm. W. Powell, Walter E. Thompson, Charles L. C. Horsey, Wm. P. Constable and George W. Taylor. This company will succeed the Wm. Skinner & Sons Shipbuilding & Dry-Dock Co. and the Baltimore Shipbuilding & Dry-Dock Co., which was recently reported as having been purchased. Harry G. Skinner is general manager of the company.

Baltimore—Clothing Factory.—Hamburger Bros & Co., clothing manufacturers, 20 South Eutaw street, have awarded contract to James F. Farley, builder, 207 North street, for the construction of addition to their factory building on Oliver street near Collington avenue; one story, 45x55.4 feet; brick with stone trimmings; slag roof; cost about \$5000.

Baltimore—Cotton Mill.—Wm. E. Hooper & Sons Company, James E. Hooper, president, Maryland Life Building, 810 South street, has purchased lot 121x134 feet adjoining its cotton mill in Woodberry. It is reported that it will be used for possible future extension to the mill.

Baltimore—Ice Plant.—The Highlandtown Ice Co., 1st street and Canton avenue, Highlandtown, has been incorporated with capital stock of \$25,000 to manufacture ice by George F. Whiting, Walter H. Church, Carle K. Church, Wm. C. Hipple and Wm. G. Richard. The company has purchased a plant with 25-ton machine, now in operation, and will not increase its capacity at present.

Baltimore—Water Company.—The Buena Vista Springs Water Co., 519 North Charles street, has been incorporated with capital stock of \$5000 to deal in spring and mineral waters by Thomas K. Barrett, Daniel B. O'Keefe, Robert H. Carr, Eugene J. Finnegan and Henry M. Walker.

Brunswick—Cannery.—Brunswick Canning Co. has been incorporated with \$20,000 capital stock by Jeremiah P. Karn, William L. Gross, William Schnauffer and others.

Catoctin Furnace—Iron Mines.—Joseph E. Phropp of Earlestown, Pa., previously reported as having purchased the Catoctin furnace property, including coke furnace, mineral and timber lands, will mine and wash the iron ore on the property for shipment to Earlestown furnace, and expect to produce 150 to 200 tons of washed ore daily. As the Catoctin furnace is of small capacity, it will probably not be operated.

Cumberland—Concrete-block Factory.—Miracle Pressed Stone Co. has been incorporated with \$5000 capital stock by Silas W. Wise, John L. McLaughlin, P. Gibson Cowden, Jr., and others.

Easton—Planing Mill and Shook Factory.—W. W. Tunis Lumber Co. It is reported, will establish planing mill and shook factory.

Elkton—Publishing.—Cecil Whig Publishing Co. has been incorporated with \$6000 capital stock by Robert C. Thacker, L. M. Haines, Frank E. Williams of Elkton and Peter E. Tome of Baltimore, Md., for the publication of the Cecil Whig.

Ellicott City—Water-power-Electrical Plant. Patapsco Electric & Manufacturing Co., which is developing the water-power of the Patapsco river near Ellicott City, has let contract to the Ambursen Hydraulic Construction Co. of Boston, Mass., for building a concrete-steel dam to develop a 28-foot fall. The power-house, containing three 500-horsepower units, is to be entirely within and underneath the roadway, the water passing over the power-house. H. von Schon, Detroit, Mich., is engineer in charge.

#### MISSISSIPPI.

Corinth—Woolen Mill.—Incorporated: Corinth Woolen Mills, capitalized at \$225,000, by S. L. Nelson, Corinth; J. L. Carleton, Morris Hoffman and Morris Rosenthal, St. Louis, Mo., and others.

Estabatchie—Lumber Mill.—Yellow Pine & Hardwood Lumber Co. has been organized by Dr. W. F. Baylis, C. M. Baylis, Andy Keen, Will Roberts and Dave Lee.

Gulfport—Shingle-staining Plant.—A stock company has been organized with W. A. Davis, president; F. W. Beall, vice-president and general manager, and J. J. Byers, constructor, for the establishment of plant to

stain and oil shingles by a patent process invented by Mr. Byers.

Natchez—Electric-light and Power Plant.—City is considering the issuance of \$75,000 of bonds for constructing electric-light and power plant. Address The Mayor.

Pascagoula—Machine Shop and Foundry.—Pascagoula Street Railway & Power Co. will erect addition, 100x36 feet, to machine shop and foundry at a cost of \$10,000. (This item was mentioned last week.)

Vicksburg—Veneering Works, etc.—Reports state that the J. F. Conant Manufacturing Co. of Milwaukee, Wis., has purchased the match factory, which will be remodeled and equipped for manufacturing veneering, baskets, shipping hampers, etc.

Wesson—Timber Development.—J. N. Cook and C. E. Grafton of Brookhaven, Miss., have purchased saw-mill with a daily capacity of 35,000 or 40,000 feet, together with 25,000,000 feet of yellow-pine timber, near Wesson, and have organized the Cook-Grafton Lumber Co. with \$30,000 capital stock to operate the plant; main office, Brookhaven, Miss. (This enterprise was referred to last week.)

#### MISSOURI.

Belton—Gas Plant.—Belton Gas Co. has been incorporated with \$16,000 capital stock by D. M. Calhern, William March and J. W. Scott.

Festus—Brick Works.—Festus Pressed Brick Co. has been incorporated with \$15,000 capital stock by Charles E. Miller, R. F. Berry, F. W. Brickey and others.

Joplin—Zinc Mines and Mill.—Union Ores Co., recently incorporated to develop zinc mines, has erected a 200-ton mill and contemplates building another mill next fall; weekly output 2000 tons; office, Miners' Bank Building.

Joplin—Zinc Mines.—W. H. Hancock, Chas. Burgess, W. H. Sills and others have incorporated the Federated Zinc Mines Co. with \$400,000 capital stock.

Joplin—Electric Supply and Construction.—W. L. Butts, A. S. Foster and A. F. Hadden have incorporated the Joplin Electric Supply & Construction Co. with \$5000 capital stock.

Kansas City—Incorporated: Western Furnace & Investment Co., with \$25,000 capital stock, by A. E. Perkins, W. R. McCormick, W. H. Kinley and others.

Kansas City—Hardware, etc.—Incorporated: Kinney Hardware & Manufacturing Co., with \$2500 capital stock, by John Kinney, E. Kinney and Thomas Gorman.

Kirkville—Gas, Heat and Electric Plant.—American Construction Co., Newton, Iowa, it is reported, has contract to build plant for the Kirkville Gas, Heat & Electric Co., recently mentioned.

Liberal—Brick and Tile Works.—Liberal Brick & Tile Co. has been incorporated with \$15,000 capital stock by James Gwynn, George Mellor, John H. Lavery and others.

Maryville—Electric-light Plant.—City will vote April 3 on \$35,000 bond issue recently mentioned for constructing electric-light plant. Address The Mayor.

Maryville—Garment Factory.—It is reported that R. L. McDonald & Co., Chicago, Ill., will establish garment factory.

Neelysville—Mercantile and Manufacturing.—Abington Bros. Mercantile & Manufacturing Co. has been incorporated with \$25,000 capital stock by George Abington, Carl C. Abington and E. L. Abington.

Springfield—Machine Shop, Foundry, etc.—New Phoenix Foundry & Machine Co. will erect machine shop, blacksmith shop, boiler shop and foundry, each about 50 feet wide by 70 feet to 100 feet long; cost \$30,000. Machinery has not as yet been purchased. (This enterprise was recently referred to.)

St. Louis—Electric Company.—Chartered: A. Riemann Electric Co., with \$5000 capital stock, by Anton Wind, George Riemann and Adam Riemann.

St. Louis—Mining.—John M. Mining Co. has been incorporated with \$100,000 capital stock by John Mackler, Ollie Little and Barney Schwartz.

St. Louis—Building and Contracting Company.—W. M. Sutherland Building & Contracting Co. has been incorporated with \$2500 capital stock by Fred N. Rose, Arthur Dickie, John S. Dickie and others.

St. Louis—Construction Company.—Hoffmann-Hogan Construction Co. has been incorporated with \$3000 capital stock by Frederick Hoffmann, Thomas Hogan, John Beck and others.

St. Louis—Power Distribution.—Belcher Building, Warehouse & Power Co. is the correct title of company recently reported incorporated for general warehousing, power distribution, etc. It will occupy a building

having 300,000 square feet of floor space. Walter A. Zelnicker is vice-president and general manager.

St. Louis—Plumbing.—James J. Fitzgerald, John P. Glennon and others have incorporated the Fitzgerald-Glennon Plumbing Co. with \$4000 capital stock.

St. Louis—Lumber Plant.—Chartered: Wheeler Tie & Timber Co., with \$25,000 capital stock, by Frank P. Hearne, John A. Ferguson and associates.

St. Louis—Stove Foundry.—Wilson Stove & Manufacturing Co. has been incorporated with \$500,000 capital stock by James B. Wilson and Stephen H. Long.

St. Louis—Land Improvement.—Incorporated: William Hahn Realty Co., with \$21,000 capital stock, by Henry Hahn, William H. Hahn, Mary Siegmund and others.

St. Louis—Iron Mines.—National Iron Mining Co. has been incorporated with \$50,000 capital stock by William Ferguson, George B. Wheeler and J. P. Thomas.

Versailles—Electric-light Plant.—City has voted affirmatively the \$5000 bond issue to complete electric-light plant. Address The Mayor.

Webb City—Lead and Zinc Mines.—Vantage Lead & Zinc Co. has been incorporated with \$500,000 capital stock by J. R. White, A. T. Hagan, W. S. Mandeville and others.

#### NORTH CAROLINA.

Barnardsville—Tannic-acid Plant and Furniture Factory.—A syndicate of High Point and Salisbury (N. C.) capitalists have purchased 5300 acres of timber land on the headwaters of the Big Ivy at \$30,000, and arrangements will be made at once for its development. It is proposed to build a tannic-acid plant and furniture factory. Judge H. B. Stevens of Asheville, N. C., represented the purchasers.

Brevard—Brick and Tile Works, etc.—Miller-DeVane Supply Co. has been incorporated with \$10,000 capital stock by J. A. Miller, Frank L. De Vane and J. A. Miller, Jr., to deal in hardware, lumber, etc. The manufacture of brick and tile is also contemplated.\*

Charlotte—Telephone System.—It is reported that the Southern Bell Telephone & Telegraph Co., main office, Atlanta, Ga., is arranging for the extension of subway cable to city limits. It is stated that about \$40,000 will be expended.

Charlotte—Cotton-gin Works.—The Fuller Combing Gin Co., which has previously been referred to, is planning to equip a temporary plant for manufacturing its combing cotton gin, but will not make its own castings. Later in the year the company will build a large and modern plant somewhere in the South, and is now considering locations. Macon, Ga.; Montgomery, Ala.; Jackson, Tenn.; Nashville and Chattanooga, Tenn., have been considered. At present the company is asking for estimates on some of the machinery it will need for the Charlotte plant. James T. Fuller is president.\*

Durham—Brick Works.—E. J. Parrish, C. A. Owens and others have incorporated the Red Brick Co. with \$10,000 capital stock.

Edenton—Bridge Construction.—It is reported that the Norfolk & Southern Railway is preparing to bridge Pamlico sound between Edenton and Mackey's Ferry, N. C., a distance of seven miles. J. A. Barron, Berkeley, Va., is supervisor of bridges and buildings.

Elizabeth City—Cannery.—D. B. Bradford, Dr. L. S. Blades and others are organizing company with \$10,000 capital stock to establish cannery.

Gold Hill—Copper Mines.—Union Copper Mining Co., H. L. Griswold, superintendent, developing copper mines with a daily output of 75 tons, contemplates doubling the capacity.

Granite Falls—Concrete Dam.—Abbe & Edwards, Hickory, N. C., have contract at \$2850 to build concrete dam for Granite Falls Manufacturing Co., cotton manufacturer.

Greensboro—Plumbing Company.—Chartered: J. Ed Albright Company, with an authorized capital stock of \$100,000, by J. Ed Albright, A. S. Thompson and others.

Hickory—Water-power-Electrical Plant.—The Water-Power Electric Co. has been incorporated with \$250,000 capital stock and privilege of increasing to \$700,000 for the development of water-power on the Catawba river near Hickory. It proposes to build a dam 600 feet long, obtaining about 6000 horsepower, which will be transmitted by electricity to Hickory, a distance of three miles, furnishing electric lights and power. Preliminary surveys have been made by Robert R. Zell of Birmingham, Ala., the consulting and superintending engineer. Plans and specifications for construction now being prepared. M. E. Thornton is president.



**Lattimore—Jute-bagging Mill.**—J. L. Stroup and others, interested in the Verner Oil Co., will build a plant for manufacturing jute bagging; not decided whether to form separate company or not. Main building will be 31x90 feet, and a portion of machinery has been ordered.

**Lenoir—Brick and Tile Works.**—Lenoir Brick & Tile Co. has been incorporated with an authorized capital stock of \$25,000. A brick dry-kiln 16x100 feet will be built; other buildings of frame. Machinery has been purchased. J. P. Spencer is president; T. P. Kincaid, secretary-treasurer.

**Lexington—Woolen Mill.**—Varnomen Woolen Mills Co. has been formed by W. H. Mendenhall, J. W. Woelfel and H. B. Varner.

**Lumberton—Cotton Mill.**—The First National Bank is promoting a movement for the organization of a \$125,000 cotton-mill company.

**Lumberton—Cotton Mill.**—R. D. Caldwell, A. W. McLean, A. E. White, H. B. Jennings and others are organizing company to build a cotton mill. Capital stock will probably be \$100,000.

**Marshall—Water-works.**—City has voted bonds for the construction of proposed water-works. W. J. Weaver, treasurer Board of Public Improvements, can be addressed.

**Mooresville—Electric-light Plant.**—Town is arranging for the construction of electric-light plant, for which \$10,000 bond issue was previously reported voted. Engineer has not been engaged; A. L. Starr, mayor.\*

**Mooresville—Foundry and Machine Shop.**—Reports state that L. A. Pangle of Concord, N. C., contemplates establishing foundry and machine shop.

**Mt. Olive—Cotton Mill.**—C. M. Black of Winston, N. C., is reported as interested in plans for organizing company to build a 5000-spindle mill in Mt. Olive.

**Oxford—Buggy Factory.**—Oxford Buggy Co., reported incorporated last week with \$100,000 capital stock to manufacture buggies, surreys, etc., has secured site and three-story frame building, 32x50 feet. Additional buildings will be erected as follows: One two-story, 56x160 feet, and one one-story, 32x50 feet, of frame construction; annual capacity 3000 to 5000 vehicles. It has absorbed the plant of the Chase City (Va.) Manufacturing Co. B. F. Taylor of Chase City, Va., is vice-president and general manager.

**Salisbury—Bottling Works.**—Chartered: Salisbury Coca-Cola Bottling Co., with \$4000 capital stock, by Luther Snyder and others.

**Sanford—Buggy Factory.**—A. W. Huntley is organizing company for the establishment of buggy factory.

**Shelby—Cotton Mill.**—Reports state that the Shelby Cotton Mills will build a large addition; present equipment 7488 spindles and 250 looms.

**Statesville—Knitting Mill.**—C. C. Vaughn of Winston, N. C., is reported as to organize a \$25,000 stock company to build ladies' underwear knitting mill.

**Statesville—Knitting Mill.**—Eugene Morrison, J. A. Bradford and associates will organize company with capital stock of \$25,000 and privilege of increasing to \$100,000 to establish knitting mill.

**Tarboro—Knitting Mill.**—Henry A. Gilliam, George W. Holderness, C. W. Jeffreys, Henry Bryan and others have incorporated the Wah Ree Knitting Mills, recently reported as to be organized. Capital stock is \$100,000. Hosiery will be manufactured.

**Watauga—Copper Mines.**—John T. Williams & Son, Bristol, Tenn., have leased the Elk Knob copper property in Watauga county and will probably develop same.

**Wilmington—Overall and Bag Factory.**—Willard Bag Co., previously reported to rebuild plant recently burned at a loss of \$40,000, has purchased site on which to erect three-story building, 50x200 feet, which will be equipped for manufacturing overalls and bags. The overall department will have 200 machines and an annual capacity of 40,000 dozen, and the bag department 20 machines and five printing presses; annual capacity 4,000,000 bags. E. Payson Willard is secretary and general manager.

#### SOUTH CAROLINA.

**Abbeville—Furniture Factory.**—Abbeville Furniture Co. has been incorporated with \$25,000 capital stock. R. E. Cox is president, secretary and treasurer, and J. A. Harris, vice-president.

**Bamberg—Electric-light Plant.**—Electric Supply Co. of Savannah, Ga., has contract for the construction of electric-light plant previously mentioned.

**Belton—Cotton Mill.**—E. Blair Rice proposes organizing company with capital stock of \$50,000 to manufacture cotton webbing, tape, etc.

**Blenheim—Bottling Works.**—Chartered: Blenheim Bottling Works, with G. D. Matheeson, president and treasurer, and Charles R. May, vice-president and secretary; capital stock \$2000.

**Charleston—Fertilizer and Phosphate Plant.**—F. W. Wagner, W. H. Welsh, Otto Tiedmann, John A. Hertz and others have incorporated the Planters' Fertilizer & Phosphate Co. with \$350,000 capital stock. A site has been secured, together with extensive phosphate lands, which will be developed. Plant will be erected and equipped for a capacity of 10,000 tons, which will later be increased.

**Clover—Cotton Mill.**—Clover Cotton Manufacturing Co. will meet April 17 to consider building a third mill to contain 10,000 spindles.

**Columbia—Bottling Works.**—Columbia Bottling Works has been incorporated with \$1000 capital stock by G. H. Charles and W. A. Stevenson.

**Union—Plumbing.**—Chartered: Laurens Plumbing Co., with \$3000 capital stock, by R. L. McNally, A. D. Gray and others.

**Union—Brick Works.**—R. L. McNally, T. E. Bailey and J. E. Hancock have incorporated the McNally Brick Co. with \$5000 capital stock.

#### TENNESSEE.

**Clarksville—Saw-mill.**—It is reported that the Clarksville Hardwood Co. has purchased, will enlarge and operate the saw-mill of Thomas Edwards.

**Cleveland—Concrete Construction.**—Cleveland Concrete Construction Co. has been incorporated to engage in the construction of buildings with seamless, continuous hollow walls. L. H. Hollingsworth is president; Gale Pearson, general manager; John B. Hargis, secretary, and J. R. Henderson, treasurer.\*

**Dayton—Chair Factory.**—A company has been organized with \$10,000 capital stock by J. W. Hudson of Dayton and D. B. Carlin of Chattanooga, Tenn., for the establishment of chair factory. Work on the erection of building has begun.

**Dover—Electric-light Plant.**—It is reported that A. M. Tippit will establish electric-light plant.

**Edgewood—Timber Development.**—S. E. Winstead and W. L. Choate have purchased a tract of timber land at \$15,000 for development purposes. They will establish saw-mill and spoke factory.

**Greenfield—Concrete Works.**—Greenfield Concrete Co. has incorporated with \$5000 capital stock to manufacture all kinds of concrete materials. J. H. Keel is president; T. G. Hummel, vice-president; J. W. Perry, secretary-treasurer, and Burney McKnight, business manager. Two two-story buildings, each 25x80 feet, will be erected.\*

**Knoxville—Clothing Factory.**—Standard Clothing Co. will erect an additional story to factory building and make other improvements at a cost of \$5000.

**Memphis—Concrete-building Blocks.**—Memphis Granolith Co. has incorporated with \$15,000 capital stock to manufacture building blocks and artificial stone; incorporators, C. W. McDaniel, S. C. McDaniel, Minnie E. McDaniel and associates.

**Memphis—Planing Mill.**—E. Sondheimer & Co. have purchased site on which to erect \$50,000 planing mill.

**Memphis—Viaducts and Subways.**—It is reported that the city, the Memphis Street Railway Co. and the different railroads using Broadway will arrange for the construction of subways and viaducts on Broadway. It is estimated that about \$500,000 will be expended. Address J. A. Omberg, Jr., city engineer.

**Nashville—Lumber Company.**—Chartered: Dunlap Lumber Co., with \$20,000 capital stock, by Henderson Baker, O. N. Trice, Jas. Henderson and associates to continue an established business.

**Nashville—Saddlery Factory.**—Nashville Saddlery Co. has been incorporated with \$200,000 capital stock by Jesse H. Thomas, J. T. McPhail, J. H. Criddle and others.

**Nashville—Hosiery Mill.**—Nashville Hosiery Mills Co. has been incorporated with a capital stock of \$125,000 by Jesse H. Thomas, J. T. McPhail, J. H. Criddle and others. This is an established enterprise which will be enlarged.

**Nashville—Stove Foundry.**—Jones & Hopkins Manufacturing Co. has increased capital stock from \$50,000 to \$100,000, and will begin at once the erection of a building, 90x185 feet, which will be equipped with the most modern machinery for manufacturing stoves, ranges, etc., doubling the present output.

**Newbern—Cannery.**—West Tennessee Packing Co. has been organized with L. M. Williams, president; Dr. E. R. Wyatt, vice-president, and Wm. A. Shipley, secretary-treasurer, to operate fruit and vegetable cannery.

**South Pittsburg—Cement Plant.**—It is reported that L. Hunt of Kansas City, Mo., has purchased 285 acres of land near South Pittsburg containing cement deposits, and will erect plant to be equipped for a capacity of 1000 barrels of cement in 24 hours.

**Trimble—Hardware.**—Chartered: Trimble Hardware Co., with \$15,000 capital stock, by T. A. Pierce, W. L. Halioman and others.

#### TEXAS.

**Brownsville—Sugar Cultivation and Refining.**—W. W. Seley, Bart Moore, L. C. Puckett, all of Waco, Texas; John T. Heard of Sedalia, Mo.; B. P. McDonald of Fort Scott, Kan.; John S. Elliott of Booneville, Mo.; John M. Allen of Tupelo, Miss., it is reported, have purchased 20,000 acres of land near Brownsville for the cultivation of sugar and the erection of sugar refinery.

**Dallas—Iron and Metal Works.**—Chartered: Wertheimer Iron & Metal Co., with \$10,000 capital stock, by S. Wertheimer, Sam Freshman and others.

**Dallas—Lumber Company.**—Chartered: J. L. Markham Lumber Co., with \$25,000 capital stock, by J. L. Markham, F. H. Etheridge and W. J. Alexander.

**Gainesville—Street-paving.**—McCollum-Crandall Construction Co., Fort Worth, Texas, has contract to pave street crossings.

**Galveston—Fire-protection Plant.**—It is reported that the Southern Pacific Company has accepted plans and begun the construction of a high-pressure fire-protection plant, independent of the city system, to cost about \$150,000. Contracts for mechanical equipment needed are understood to have been awarded.

**Galveston—Rice Irrigation.**—Jackson County Canal Co., previously reported incorporated with \$15,000 capital stock, will establish 250-horse-power pumping plant and irrigate 1400 acres of rice lands. A frame building, 40x80 feet, of concrete, will be erected and 1200 feet of flume constructed.

**Godley—Flour Mill and Grain Elevator.**—B. B. Robinson, J. W. Lowder and associates have incorporated the Godley Mill & Elevator Co. with \$15,000 capital stock.

**Houston—Water Distillation.**—Aqua Pura Bottling Co. has been incorporated with \$20,000 capital stock by Dr. James House Bute, J. M. Dorrance, J. H. Kirby, O. L. Nosworthy and associates to drill artesian well and the distillation of the water obtained for drinking purposes. A plant will be erected at once. This enterprise was referred to last week.

**Houston—Fig-preserving Factory.**—Reports state that J. C. Carpenter of Aldine, Texas, contemplates organizing company for the establishment of plant for the manufacture of fig products.

**Houston—Oil-pipe Line and Natural-gas Mains.**—Texas Company has applied for franchise to lay oil-pipe line and natural-gas mains, furnishing the city with oil and natural gas.

**La Porte—Road Improvements.**—W. S. Hipp of Houston, Texas, will shortly begin macadamizing road from the West La Porte Depot to Morgan's Point, a distance of four miles, for which contract was recently awarded at \$47,000.

**Llano—Flour Mill, Water-works, Electric-light and Ice Plant.**—Llano Milling & Manufacturing Co. will operate 50-barrel flour mill, water-works and electric-light plant and 10-ton ice plant, recently referred to. Buildings are completed. A. J. Zilker of Austin, Texas, is president; W. W. Canine of Llano, vice-president, and Geo. E. Shelley of Austin, Texas, secretary.

**Llano—Iron Mines.**—It is reported that John N. Penton of Cleveland, Ohio, is investigating iron-ore mines near Llano with a view to developing same.

**Marshall—Publishing.**—American Publishing Co. will shortly begin the publication of a daily newspaper to be called the Marshall American. W. F. Speight is business manager.

**Mullin—Incorporated.**—M. C. Kirkpatrick Company, with \$8000 capital stock, by M. C. Kirkpatrick, M. J. Kirkpatrick and C. Y. Early.

**Pecos—Cement Plant.**—James F. McKenzie of Pecos and William Endaly of Grand Falls, Texas, are reported as to establish cement plant.

**Ranger—Lumber Company.**—Ranger Lumber Co. has been incorporated with \$15,000 capital stock by G. H. Bohning, William Bohning and others.

**Richmond—Stave Factory.**—John Powell and associates contemplate establishing stave factory.

**San Antonio—Gas and Electric Plants.**—Citizens' Mutual Gas, Electric & Power Co. has applied for franchise to construct gas and electric-light and power plants. This

company was recently reported incorporated with \$50,000 capital stock. J. M. Nix is general manager.

**San Antonio—Lumber Company.**—John Clem, E. L. Sorreiss, R. H. Clem and others have incorporated the Clem Lumber Co. with \$20,000 capital stock.

**Sherman—Drain Tile.**—It is reported that J. A. Long and M. W. Wright of Portland, Ind., are investigating with a view to locating plant for the manufacture of drain tile.

**Sweetwater—Hardware.**—Montgomery Hardware Co. has been incorporated with \$20,000 capital stock by R. W. Montgomery, E. O. Daniel and others.

**Victoria—Tannery.**—It is reported that Geo. W. Adler of Philadelphia, Pa., contemplates establishing tannery.

**Yantis—Telephone System.**—Yantis Telephone Co. has been incorporated with \$10,000 capital stock by B. L. Farr, C. E. Smith, L. C. Mapes and others.

#### VIRGINIA.

**Berkley—Cement Plant.**—It is reported that the American Cement Co., 604-610 Pennsylvania Building, Philadelphia, Pa., is preparing to begin constructing its proposed cement plant.

**Bland County—Timber Development.**—Reports state that P. H. Rorror, R. H. Angel, Charles L. Bush, all of Roanoke, Va., and B. T. Johnson of Narrows, Va., have purchased from the Keystone Hardwood Lumber Co. of Bluefield, W. Va., 6000 acres of timber land for development purposes.

**Chatham—Ice Plant.**—J. H. Pigg and William Minor, it is reported, contemplate erecting ice plant.

**City Point—Phosphate Plant.**—Richmond (Va.) Phosphate Co., it is reported, will rebuild plant which recently collapsed.

**Edinburg—Water-works.**—Town will vote April 26 on the issuance of bonds for constructing water-works. It is proposed to build a 1,000,000-gallon reservoir. About \$15,000 will be invested; C. H. Fadeley, mayor.

**Emporia—Water-power Electrical Plant.**—Greensville Water Power Co. will develop the water-power of the Meherrin river, building a 36-foot dam and installing machinery for the development of 4000 horse-power, which will be transmitted by electricity for light and power purposes. A committee has been appointed to select an engineer, and as soon as plans and specifications are completed bids will be asked for the construction of dam and installation of machinery; W. F. Deal, secretary-treasurer. (This enterprise was mentioned last week.)

**Lee County—Coal Mines.**—Dominion Coal Co., recently mentioned as organized to develop coal lands in Lee county, will install plant for a daily output of 800 tons at a cost of \$50,000. Electrical hauling and cutting machinery will be used; B. H. Keeney, Excelsior, Ky., general manager.

**Louisa—Woodworking Plant.**—It is reported that James E. Porter and O. P. Blinn, Jr., will establish woodworking plant.

**Marion—Builders' Supplies.**—Marion Lumber & Contracting Co. has been organized to manufacture inside finishing materials, builders' supplies, etc.

**Martinsville—Furniture Factory.**—E. C. Stone is organizing company for the establishment of furniture factory.

**Norfolk—Amusement Company.**—Chartered: Great Northern Amusements & Construction Co., with an authorized capital stock of \$25,000. J. E. West is president and treasurer, and G. C. Heidt, secretary.

**Norfolk—Lumber Plant.**—Jarrett Lumber & Shingle Co. has been incorporated with an authorized capital stock of \$50,000. J. H. Jarrett is president, and E. W. Winchester, secretary-treasurer.

**Norfolk—Ship-cleaning Machines.**—Martin Ship Cleaner Co. is having plans prepared for plant and machinery to be installed for the manufacture of ship-cleaning machines, for which site was mentioned last week as purchased. F. H. Follett, Utica, N. Y., is treasurer.

**Norfolk—Grain Elevator.**—Norfolk & Western Railway, it is reported, is having plans prepared for the erection of grain elevator at Lambert's Point; C. H. Churchill, chief engineer, Roanoke, Va.

**Norfolk—Railway Bridges.**—It is stated that the War Department has decided to require the Norfolk & Western Railway Co. in building its two proposed bridges across the eastern and southern branches of the Elizabeth river, to provide an opening of 140 feet and of 125 feet in the clear, respectively. The company's original plans called for 75-foot openings. C. H. Churchill, Roanoke, Va., is chief engineer.

**Norfolk—Electric-power Plant.**—It is announced that the Norfolk Railway & Light

Co. will, at its stockholders' meeting on April 19, increase its capital stock by \$2,000,000, this amount to be furnished by new interests which wish to invest in the enterprise. Of the amount stated it is understood \$1,000,000 will be expended to erect a new electric-power station of 15,000 horse-power, and that the other \$1,000,000 will be expended for track extensions, building additional car barns and providing other betterments in anticipation of the passenger traffic during the Jamestown Exposition. (These improvements referred to March 11.) E. C. Hathaway is general manager.

**Petersburg—Granite Quarries.**—Petersburg Granite Co. has been incorporated with an authorized capital stock of \$100,000. William Dibble, 52 Central Savings Bank Building, Baltimore, Md., is president; Samuel P. White, Beaver Falls, Pa., vice-president, and William Penrose, 209 St. Paul street, Baltimore, Md., secretary-treasurer.

**Pulaski—Water-power-Electrical Plant.**—Town has engaged an engineer to investigate the water sites adjacent with a view to establishing water-power-electrical plant for lighting the town and operating water-pumping station.

**Richmond—Sole Pipe and Plumbers' Supplies.**—Virginia Pipe & Foundry Co. has been organized with \$50,000 capital stock to manufacture cast-iron soil pipe and plumbers' supplies. Contract has been let to the McClintic-Marshall Construction Co., Pottstown, Pa., for the erection of a steel building 125x150 feet. Thomas S. Wheelwright is president of the company; C. Manning, Jr., vice-president, and H. R. Wayt, secretary-treasurer.

**Richmond—Foundry.**—Richmond Foundry & Manufacturing Co., previously reported incorporated with \$100,000 capital, is reported as having purchased site on which to erect plant.

**Richmond—Shoe Factory.**—Davis Shoe Co. has secured four-story building which will be equipped for a daily output of 1800 pairs of shoes.

**Ruther Glen—Heading Mill.**—T. Hunter & Co. will rebuild heading mill recently burned; daily capacity 4000 sets of keg heading. Machinery has been purchased.

**Stafford County—Pyrites Mines.**—Reports state that J. F. Horene of Fredericksburg, Va., has purchased three tracts of land in Stafford county containing pyrites, and will arrange at once for its development.

**Suffolk—Land Improvement.**—Incorporated: Mecklenburg Land & Development Co., with B. E. Cogbill, president, and W. H. Taylor, secretary-treasurer; authorized capital stock \$10,000.

**Virginia—Coal Mines.**—Kansas City Coal & Development Co., reported incorporated last week under Kansas City, Mo., owns 25,000 acres of coal lands in the Pocahontas fields, and will arrange at once for its development. R. A. Moore is president; D. P. Gray, secretary, and W. F. Nine, assistant secretary; main office, Kansas City, Mo.

**Williamsburg—Land Improvement.**—Colonial Extension Co. has been organized with authorized capital stock of \$25,000. E. W. Warburton is president; R. L. Spencer, vice-president; H. N. Phillips, treasurer, and F. R. Savage, secretary. E. W. Warburton and others recently purchased Tazewell Hall property, which will be divided into building lots. About \$3000 will be expended in improvements.

**Williamsburg—Water works and Electric Light Plant.**—Town will vote April 17 on the issuance of bonds for constructing water-works and electric-light plant. Address Town Clerk.

#### WEST VIRGINIA.

**Belington—Sewerage System and Street Improvements.**—City has voted affirmatively the \$30,000 bond issue previously reported for constructing sewerage system and street improvements; R. B. Rohrbough, mayor.

**Belington—Steel Works.**—North American Steel Co. has been incorporated with \$1,200,000 capital stock by Grant C. Broomall, Harvey Hatch, C. R. Husk of Belington, Samuel M. Nease of Weston, W. Va., and David A. Nease of St. Louis, Mo.

**Benwood—Brewery.**—Benwood Brewing Co., mentioned last week as having secured site on which to build plant, will erect building, 234x200 feet, and equip for an annual capacity of 35,000 barrels.

**Charleston—Coal Mines.**—New River-Kanawha Fuel Co. has been incorporated with M. T. Roach, president; E. P. Mucklow, secretary-treasurer, and R. H. Richardson, general manager, to mine coal. The company owns 21 mines with a daily capacity of 10,000 tons, and will open up 8 or 10 more mines in the near future. No coke ovens will be built.

**Charleston—Coal Mines.**—New River Collieries Co. has been organized with \$8,000,000

capital stock for the development of approximately 30,000 acres of coal land acquired. It is estimated that the first year's output will amount to 2,000,000 tons. C. J. Wittenberg, president of the Chesapeake & Ohio Coal & Coke Co., 11 Broadway, New York, N. Y., will be president of the company, and A. M. Wittenberg, secretary-treasurer.

**Charles Town—Construction Company.**—Chartered: Jefferson Construction Co., with \$250,000 capital stock, by T. T. Perry, W. A. Higgs, R. W. Alexander and associates.

**Chester—Amusement Company.**—Chartered: Samuel McCutcheon Amusement Co., with \$25,000 capital stock, by George R. Ahrents, Samuel McCutcheon and others.

**Chester—Amusement Company.**—George R. Ahrents, J. H. Maxwell, T. L. Young and associates have incorporated the Rock Springs Company with \$125,000 capital stock.

**Fayette—Power-house.**—Fayetteville-Fayette Railway will erect an electric power-house, two stories, 75x45 feet, at a cost of \$4000; D. S. Roberts, Fayetteville, W. Va., manager.

**Grafton—Window-glass Factory.**—Grafton Window Glass Co., recently reported incorporated with \$75,000 capital stock to manufacture window glass, will erect a 36-blower tank plant. H. C. Compton of Grafton is president; H. M. Lewis of Morgantown, W. Va., vice-president; George W. Lowther, secretary, and A. H. Phillips, treasurer, both of Grafton.

**Guyandotte—Mining and Engineering Company.**—Chartered: Sturm & Dillard Company, with \$25,000 capital stock, by John L. Dillard of Kenova, W. Va.; C. Silliman of Huntington, W. Va., and associates; main office, Huntington, W. Va.

**Keyser—Street-paving.**—City is reported as to ask bids about April 20 for paving and grading to cost \$11,000; R. A. Welch, mayor.

**Lester—Coal Lands.**—Hughes Creek Coal Co. of Kanawha, W. Va., it is reported, has purchased a tract of coal land at Lester, which will probably be developed.

**New Martinsville—Reservoir.**—City is considering issuing \$10,000 of bonds for erecting storage reservoir. Address The Mayor.

**Paw Paw—Orchard and Supply Company.**—H. W. Miller, J. C. McKown of Paw Paw, G. P. Miller and John J. Cornwell of Romney, W. Va., have incorporated the Potomac Orchard & Supply Co. with \$25,000 capital stock.

**Philippi—Orchard Company.**—Edmund R. Dyer, William D. Zinn, Symon S. Talbott, Sylvanus W. Zinn and Richard E. Talbott have incorporated the Laurel Hill Orchard Co. with \$25,000 capital stock.

**Shepherdstown—Electric Plant.**—Martinsburg (W. Va.) Power Co., it is reported, will build a power-house.

**Shepherdstown—Publishing.**—Eastern Panhandle Publishing Co. has been incorporated with \$10,000 capital stock by H. E. Munday, J. D. Billmeyer and associates to continue publishing the Eastern Panhandle.

**Weston—Tile Works.**—Samuel M. Nease, Henry F. Rymer of Weston, William T. Nichols of Wellsburg, W. Va.; Joseph R. Miller of Morgantown, W. Va., and David A. Nease of St. Louis, Mo., have incorporated the Monarch Tile Co. with \$700,000 capital stock.

**Wheeling—Laundry.**—W. H. Hage, W. R. Buskirk, Annie C. Hague and associates have incorporated the Imperial Laundry Co. with \$10,000 capital stock.

**Williamson—Coal Mines.**—Washburn Coal Co. has been incorporated with \$300,000 capital stock by C. H. Bronson, C. Culcross, W. H. Bronson and others.

#### INDIAN TERRITORY.

**Blocker—Coal Mines.**—Blocker Coal & Land Co., reported incorporated last week under Fort Smith, Ark., will develop coal properties at Blocker, and has invested about \$25,000 in tracks, tipples, townsite, etc. T. J. Wright is president; W. F. Blocker, vice-president; A. H. Ritter, secretary; A. N. Seward, treasurer, and H. L. Rogers, manager of mine; main office, Fort Smith, Ark.

**Chickasha—Water-works and Sewerage System.**—W. W. Cook & Son, Junction City, Kan., have contract at \$45,442 for the construction of water-works and sewerage system for which Burns & McDonald, Kansas City, Mo., were previously reported as making surveys.

**Council Hill—Flour Mill and Grain Elevator.**—Central Mill & Elevator Co. has been incorporated with \$5000 capital stock by W. H. Falconbury, Trevor Faulkner, G. C. Stotts and others.

**Muskegee—Electric-light Plant.**—City has granted franchise to W. L. Reeves, A. W. Robb, W. H. Patterson, George W. Barnes, J. Lee Dabbs and others.

**Muskogee—Oil and Gas Wells.**—Homer Needles, George W. Walter, Jack McConnell, W.

J. Cook and M. Ault have incorporated the Quaker Oil & Gas Co. with \$50,000 capital stock.

**Porum—Coal Mines.**—It is reported that D. S. Redican has begun the development of coal properties recently discovered.

**Sulphur—Planing Mill.**—Sulphur Planing Mill & Lumber Co., M. T. Barrier, proprietor, will rebuild planing mill recently reported burned. A one-story stone building, 48x60 feet, will be erected. About \$4000 will be invested.\*

#### OKLAHOMA TERRITORY.

**Davenport—Concrete-block Factory.**—Davenport Concrete Co. has been organized with \$5000 capital stock by A. J. Langer, T. S. Watts and C. C. Randal.

**Enid—Ice and Cold-storage Plant.**—People's Ice & Cold Storage Co., reported incorporated last week with \$25,000 capital stock, will erect frame building 40x108 feet; daily capacity 27 tons; J. H. Taylor, president, and W. E. Thompson, secretary-treasurer and manager.

**Gotebo—Cotton Mill, Grist Mill and Elevator.**—Farmers' Union Gin, Mill & Elevator Co. has been incorporated with \$10,000 capital stock by F. D. Lee of Gotebo, T. W. Hopper, J. B. Cook, T. T. Harris of Komalty, O. T., and associates.

**Lawton—Natural-gas Mains.**—Lawton Natural Gas Co., recently reported organized, has secured franchise to furnish the city with natural gas.

**Mustang—Oil and Gas Wells.**—Mustang Valley Oil & Gas Co. has been incorporated with \$50,000 capital stock by Frank Dalton, Fred L. Mohr, Frank M. Colville, J. M. Bindley and associates.

**Newkirk—Telephone System.**—Chartered: Newkirk Commercial Mutual Telephone Co., with \$12,000 capital stock, by C. A. Johnson, H. M. Ziegler and associates.

**Norman—Steam Laundry.**—Chartered: Norman Steam Laundry, with \$8000 capital stock, by J. H. Gonterman, J. B. Dudley and H. S. Peebles.

**Oklahoma City—Silk Mill.**—Incorporated: American China Silk Co., with capital stock of \$1,000,000, for manufacturing silk goods, by Paul A. Shuler, Mamie D. Herskowitz and A. S. Erigelman of Oklahoma City, J. H. Stepher of St. Louis, Mo., and Henry J. Donzelonne of Houston, Texas.

**Oklahoma City—Paint and Decorating Company.**—Mattison Paint & Decorating Co. has been incorporated with \$7000 capital stock by Frank Mattison, Clara Mattison and T. H. Suttman.

**Oklahoma City—Flour Mills.**—J. M. Case Mill Manufacturing Co., "Southwest," reported incorporated last week under Hobart, O. T., will manufacture flour mills. Size and character of buildings have not been determined; office, 1/2 West Main street.

**Oklahoma City—Grading.**—A. J. Day has been awarded contract for grading 14th street.

**Oklahoma City—Sewerage System.**—Charles Herr of Guthrie, O. T., has been awarded contract at \$183,265.54 on the first seven sections of specifications for constructing sanitary sewerage system, and Joseph Severns of Guthrie, O. T., contract for eighth section at \$31,121.60. Mr. Herr also received contract for constructing extension of sewer north and along the Santa Fe right of way.

**Oklahoma City—Grain Company.**—Higgins-Roberts Grain Co. has been incorporated with \$10,000 capital stock by J. M. Higgins, W. N. Julian and C. C. Roberts, all of Lone Wolf, O. T.

#### BURNED.

**Arlington, Texas.**—Neil P. Anderson's cotton gin; loss \$10,000.

**Asheville, N. C.**—J. G. Chambers & Sons' saw and grist mill; loss \$2000.

**Bryan, Texas.**—First Methodist Church; loss \$22,000.

**Calvert, Texas.**—First National Bank's building; Harris & Proctor Co.'s building.

**Carnegie, O. T.**—A. B. & T. I. Brown's cotton gin.

**Choice, Texas.**—A. B. Buckner's lumber mill.

**Clay City, Ky.**—Swann-Day Lumber Co.'s saw-mill.

**Gracey, Ky.**—J. W. Covington's carriage and blacksmith shop; loss \$4000.

**Homan, Ark.**—Wilbur M. Paup's cotton gin; loss \$4000.

**Leaf, Miss.**—W. F. Green Lumber Co.'s planing mill; loss \$26,000.

**Lewisburg, Tenn.**—American Lead Pencil Co.'s dry-kiln; loss \$2500.

**Longview, Texas.**—Campbell & Piller's saw-mill damaged by boiler explosion; loss \$2000.

**Norfolk, Va.**—United States Peanut Co.'s peanut and candy factory; loss \$50,000.

**Sardine, Ala.**—E. M. Jordan's saw-mill, planing mill, cotton gin and grist mill; loss \$3500.

**Winchester, Ky.**—Union depot, owned by the Chesapeake & Ohio Railway, I. Garrison, supervisor bridges and buildings, Richmond, Va., and the Louisville & Nashville Railway, W. H. Courtenay, chief engineer, Louisville, Ky.; loss \$50,000.

#### BUILDING NOTES.

\*Means machinery, proposals or supplies are wanted, particulars of which will be found under head of "Machinery, Proposals and Supplies Wanted."

**Albany, Ga.**—School Building.—Little & Phillips, Cordele, Ga., have contract at \$20,170 for the erection of high-school building, previously mentioned; Bruce & Everett, Atlanta, Ga., architects.

**Argenta, Ark.**—School Building.—Bids are being received by Frank L. Bruner, secretary school board, 700 Park avenue, for a two-story concrete school building. Plans and specifications can be had on application. Bond in the sum of 10 per cent. of amount of proposal must accompany each bid. Usual rights reserved.

**Asheville, N. C.**—Store Building.—M. Lutz has purchased site and is having plans prepared for a two-story building with cement-block front.

**Asheville, N. C.**—Hotel.—C. H. Miller is arranging for the erection of a six-story hotel, 128x129 feet; concrete blocks, steel frame, electric lights, two passenger elevators; cost \$125,000.

**Atlanta, Ga.**—Church.—J. W. Golucke & Co. have completed plans for \$50,000 edifice to be erected by the Orthodox Greeks.

**Atlanta, Ga.**—Hotel.—Bruno Bukofzer, proprietor Terminal Hotel, has begun the erection of a five-story hotel.\*

**Attalla, Ala.**—School Building.—S. W. Johnston, president of school board, will receive bids until April 10 for the erection of school building. Plans and specifications on file in the City Hall. Usual rights reserved.

**Austin, Texas.**—Building.—Joseph Nalle will erect two-story building 68x138 feet at a cost of \$15,000, replacing structure recently burned. Bids for the erection will be opened April 3.

**Bainbridge, Ga.**—Dwelling.—Bids will be opened April 25 for the erection of two-story residence, 40x58 feet, by J. W. Callahan after plans by W. B. Camp, Jacksonville, Fla.; building to be constructed of sand-lime brick, G. I. shingle roof, marble steps, electric fixtures, modern plumbing, steam heat.

**Bainbridge, Ga.**—Bank Building.—P. E. Dennis, Macon, Ga., is preparing plans for three-story building, 30x125 feet, to be erected by the Deatur County Bank; steam heat, electric fixtures, etc.\*

**Baltimore, Md.**—Dwellings.—Edward J. Gallagher, builder, 2638 East Baltimore street, will erect 20 two-story brick dwellings on Port and Orleans streets to cost about \$20,000.

**Baltimore, Md.**—Dwellings.—Bernard Thillman, builder, 1065 East Madison street, has purchased lot on Port street near Lafayette avenue, and will erect seven two-story dwellings on the site.

**Baltimore, Md.**—Store Building.—N. Snel-lenburg & Co., Philadelphia, Pa., have purchased lot at northeast corner Baltimore and Liberty streets and will erect store building on the site, which is 36x105 feet. It is reported that Charles M. Anderson, architect, 324 North Charles street, has been commissioned to prepare plans and specifications for the building.

**Baltimore, Md.**—Church.—Second Baptist Church, Walter Rhodes, pastor, 1803 Walbrook avenue, has commissioned Edward H. Glidden, architect, Wilson Building, 301 North Charles street, to prepare plans and specifications for church building to be erected at Orleans and Luzerne streets; Joshua Levering, 200 Stewart Building, Lombard and Gay streets, chairman building committee.

**Baltimore, Md.**—Warehouse.—Joseph W. Hargrave, president of Hargrave Blacut Co., 443 North street, has purchased lot at 646 West Baltimore street, which, together with 648 West Baltimore street, will be improved with warehouse.

**Baltimore, Md.**—Dwellings.—The Park Front Building Co., Henry H. Hubner, treasurer, Maryland Telephone Building, Lexington and Courtland streets, has purchased five blocks of land on Reisterstown road and will erect about 100 two-story dwellings on the site, which, together with the buildings, will cost about \$250,000.

**Baltimore, Md.**—Warehouse.—Thomas W. Pumphrey, 123 Centre Market Space, has



commissioned J. C. Spedden, architect, 509 South Paca street, to prepare plans and specifications for warehouse to be erected at 614 East Lombard street.

Baltimore, Md.—Florists' Exchange.—The Florists' Exchange, John J. Perry, manager, 505 North Eutaw street, has commissioned J. Edward Laferty, architect, 11 East Pleasant street, to prepare plans and specifications for exchange building to be erected at southwest corner St. Paul and Franklin streets; two stories, 20x100 feet.

Baltimore, Md.—Dwellings.—Elias A. Blackshere, 2542 Eutaw Place, has awarded contract to Marion H. Murray, 308 West North avenue, for the construction of nine two-story brick and stone dwellings at 10th and Presbury streets to cost about \$15,000.

Baltimore, Md.—Dwellings.—The Luzerne Land Co. has awarded contract to Frank Novak, builder, 800 North Duncan street, for the construction of 11 two-story brick and stone dwellings on Jefferson and Glover streets to cost about \$10,000.

Baltimore, Md.—Dwellings.—John G. Maier, 153 North Gay street, has awarded contract to Frank Novak, builder, 800 North Duncan street, for the construction of 15 two-story brick and stone dwellings on Federal and Collington streets to cost about \$18,000.

Baltimore, Md.—Church.—St. Mark's Reformed Church, James M. Mullan, pastor, 2302 Federal street, has awarded contract to R. H. Frazier, 220 St. Paul street, for the construction of church building at northwest corner Collington avenue and Hoffman street; one story and basement, 59.6x125.10 feet; stone exterior; terra-cotta trimmings; cast-iron columns; slate roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; Charles E. Cassell & Son, architects, Law Building, Courtland near Lexington street.

Baltimore, Md.—Office Building.—The Consolidated Gas Co., Lexington and Liberty streets, has awarded contract to H. H. Brown, 199 Clay street, for alterations and addition to four-story office building at 191 West Lexington street.

Barloursville, Ky.—School Building.—Board of Education has ordered the issuance of \$10,000 of bonds for school purposes.

Barnesville, Ga.—Dwelling.—Mrs. Matthew Grace has let contract for \$3000 residence.

Bay St. Louis, Miss.—Bank Building.—Plans by R. S. Duval have been adopted for proposed building for the Merchants' Bank; to be two stories of brick with stone trimmings.

Belton, Texas.—College Building.—Baylor Female Baptist College is reported to erect \$10,000 annex. Address The President.

Birmingham, Ala.—Building.—J. L. Burns has contract for the erection of building for J. W. Donnelly, 1807 Second avenue, after plans by W. E. Spink; brick construction, 50x75 feet; marble and tile flooring; hardwood finish; hot-air or hot-water heating plant; electric and gas fixtures; cost \$18,000.

Birmingham, Ala.—Union Depot.—Birmingham Terminal Co., G. B. McCormack, president, has let contract to Oliver Sollitt Company, Chicago, Ill., for the erection of union depot, previously mentioned; to be 100x600 feet; fireproof construction; steam heat; electric lights; P. Thornton Mayre, Atlanta, Ga., architect. Contract for grading the site has been awarded to Brown & Jones. It is estimated that the total cost of depot, including lands, mechanical equipments, etc., will approximate \$1,000,000.

Birmingham, Ala.—Apartment-house.—Chartered: Margaret Apartments Co., with an authorized capital stock of \$75,000. W. A. Chenoweth is president; Lewis Minor, vice-president, and T. C. Thompson, secretary. Mr. Chenoweth was recently reported as having let contract for the erection of a three-story pressed-brick apartment-house.

Birmingham, Ala.—Telephone Exchange.—A. J. Krebs has contract at \$65,000 for the erection (exclusive of heating and lighting) of five-story steel-frame building for the Southern Bell Telephone & Telegraph Co., recently mentioned.

Birmingham, Ala.—Parish-house.—St. Andrew Episcopal Church, Raimundo de Ovies, pastor, is completing arrangements for the erection of proposed parish-house; to be of brick or concrete and cost about \$12,000.

Brownwood, Texas.—College Building.—Board of trustees of Howard Payne College are arranging for building two wings to same.

Bryan, Texas.—Church.—M. E. Church, South, I. F. Belts, pastor, is having plans prepared by J. E. Flauders, Dallas, Texas, for brick edifice to be erected at a cost of \$22,000, replacing structure recently burned. Steam or hot-water heating plant and electric lights will be installed.\*

Carthage, Mo.—Store Building.—Bids will be received until April 15 for the erection of

a two-story store building by E. S. Williams after plans by Joe A. Prather; to be 50x100 feet; brick and stone front; steelwork; tile floors; hard plaster; gas and electric fixtures; plate and prismatic glass; modern plumbing; cost \$6000.

Chattanooga, Tenn.—Theater.—Rooney & Atkinson, Richmond, Va., have contract to erect proposed \$10,000 building for Bijou Theater.

Chattanooga, Tenn.—Depot.—Competitive plans are being invited for the erection of terminal depot by the Chattanooga Station Co., recently mentioned. W. D. Jenkins, News Building, is engineer in charge.

Clarendon, Ark.—School Building.—Robert J. Torry, secretary school board, will receive bids until April 20 for the erection of a two-story brick school building. Plans and specifications may be seen at office of the secretary and at the office of Gibb & Sanders, architects, Reider Building, Little Rock, Ark. Certified check for \$500 must accompany each bid. Usual rights reserved.

Columbia, S. C.—Hotel.—Julius H. Walker has had plans prepared for the erection of a 50-room hotel.

Cowpens, S. C.—School Building.—Town will vote April 17 on a \$6000 bond issue for erecting school building; J. A. Martin, chairman board of trustees.

Dallas, Texas.—Amusement Park.—Oak Cliff Park & Theater Co. has been incorporated with \$75,000 capital stock for the development of 52 acres of land at Oak Cliff as amusement park. Plans have been adopted for leveling the grounds, building walks and drives, steel bridges; also for a summer theater with a seating capacity of 2000, skating rink, dancing pavilion, etc. All kinds of amusement devices will be installed. E. W. Morton, Jr., is president; C. A. Mangold, vice-president and treasurer, and John A. Ewton, secretary.

Dallas, Texas.—Church.—Trinity Church is reported as completing arrangements for the erection of proposed \$30,000 edifice; G. M. Gibson, pastor.

Dalton, Ga.—Hotel.—Chatsworth Land Co. will erect three-story hotel, 40x70 feet, at a cost of \$5000.\*

Darlington, S. C.—Warehouse.—Chartered: Farmers' Storage Warehouse Co., with \$5000 capital stock. W. J. Rogers is president; D. T. McKelthan, vice-president, and B. F. Williamson, secretary-treasurer.

De Kalb, Texas.—School Building.—J. A. Goodman of Clarksville, Texas, has contract at \$1850 for the erection of brick school building, previously mentioned. R. S. Glenn & Co. of Clarksville, Texas, prepared the plans.

Elkins, W. Va.—Opera-house.—Elkins Opera-House Co. is having plans prepared by A. C. Lyons, Fairmont, W. Va., for improvements to opera-house.

Elkton, Md.—Hospital.—Chartered: Emergency Hospital, by Joseph Bruff Seth, Oswald Tilghman, William George Quimby and associates, to erect hospital.

Elm Grove, W. Va.—Pythian Temple.—Mystic Lodge No. 21 is completing arrangements for the erection of proposed three-story Pythian temple to cost \$10,000.

El Paso, Texas.—Association Building.—Site has been secured on which to erect \$50,000 building previously reported for the Y. M. C. A. Trost & Trost are preparing the plans.

El Reno, O. T.—Depot.—It is reported that the Chicago, Rock Island & Pacific Railway will erect a \$25,000 depot; W. S. Tinsman, general superintendent, Choctaw district, Little Rock, Ark.

Evergreen, Ala.—Jail Building.—F. J. Dean, judge of probate, Conechu county, Alabama, will receive bids until April 2 for erection of jail building, in accordance with plans and specifications on file in his office; also in office of B. B. Smith, architect, Montgomery, Ala. A certified check for \$500, payable to F. J. Dean, judge of probate, must accompany each bid. Usual rights reserved.

Farmington, Mo.—Buildings.—J. W. McCarthy has contract to erect auditorium and employees' home, two stories, 180x63 feet, and two-story cottage 60x50 feet at State Hospital No. 4 at a cost of \$50,000. Small hand-power elevator will be installed. H. H. Hohenschild, Rolla, Mo., was recently mentioned as preparing plans.

Florence, Ala.—School Building.—W. J. Wilkins has contract to erect school building after plans by C. C. Wilson, Columbia, S. C.; three stories, 60x180 feet, center wing 160 feet; fireproof construction; hot-air-heating plant; electric lights; cost about \$45,000.

Fort Worth, Texas.—Bank Building.—J. M. Davis has contract to erect building for the State National Bank.

Fort Worth, Texas.—Building.—E. H. Crowder of Dallas, Texas, has purchased site on which to erect a three-story building.

Fort Worth, Texas.—Building.—Sanguinetti & Statz are preparing plans for building previously reported to be erected by John M. Shelton. Contract for the foundation has been let to the Texas Building Co.

Fort Worth, Texas.—Church.—S. Wemyss Smith and L. G. Schenk are preparing plans for edifice to be erected by the Methodist Church, South, Alonzo Monk, pastor, at a cost of \$100,000; building to be 104x125 feet; press brick, stone and terra-cotta; tile or slate roof. Ornamental copper work, skylight, art glass, prism glass, marble work, rubber tile, concrete floor, metal ceiling, elastic pulp plaster, staff, corner beads, modern plumbing, exhaust fans, hot-air or steam heat, organ, pews and furniture will be required.

Fort Worth, Texas.—Dwelling.—Smith & Schenk are preparing plans for a brick and frame cottage for S. Wemyss Smith.

Fort Worth, Texas.—Dwelling.—G. W. Smith has contract to erect residence for M. Berney after plans by Smith & Schenk.

Fort Worth, Texas.—Skating Rink.—Texas Building Co. has contract to erect a maple skating rink for the Interstate Amusement Co. after plans by L. B. Weinman.

Frederick, Md.—City Hall.—Charles A. Poole has contract to remodel city hall. About \$12,000 will be expended, exclusive of heating, lighting and decorating.

Fredericksburg, Va.—Office Building.—Dr. W. J. Chewning has let contract to E. G. Heflin for a three-story office building.

Gadsden, Ala.—Hospital.—A. D. Simpson is preparing plans for hospital previously reported to be erected by Dr. A. W. Ralls; two stories, 40x72 feet; ordinary brick; cost \$8000. Hot-water-heating plant, electric lights and hand-power elevator will be installed.

Gadsden, Ala.—Apartment-houses.—A. Duncan Simpson is preparing plans for three six-room apartment-houses to be erected by Wm. P. Cobb, Tuskegee, Ala.; ordinary construction; electric fixtures; cost \$5000.

Gadsden, Ala.—Dwelling.—Fred Mausser & Co., Birmingham, Ala., have contract at \$5000 for the erection of proposed residence for S. S. Spence after plans by A. D. Simpson.

Georgetown, Texas.—Church.—C. H. Page, Jr., Austin, Texas, is preparing plans for stone edifice 50x80 feet to be erected by the Swedish Methodist Episcopal Church, O. F. Linstrum, pastor, at a cost of \$8000. Furnace and electric lights will be installed.

Granger, Texas.—School Building.—Henry Strive of Taylor, Texas, is preparing plans for school building, for which \$15,000 of bonds was recently reported voted.

Hattiesburg, Miss.—Building.—Hightower & Powe have let contract to W. T. Roberts for the erection of a two-story building 60x100 feet; concrete blocks; electric fixtures; hand-power elevator; cost \$10,000.\*

Hattiesburg, Miss.—Bank Building.—W. D. Hadow & Co., Jacksonville, Fla., have contract for the erection of two-story stone and marble building for the Hattiesburg Trust & Banking Co.

High Point, N. C.—Church.—Washington Street M. E. Church is arranging for the erection of \$50,000 edifice. Address The Pastor.

Houston, Texas.—Building.—F. Heidelberg has contract to erect two-story brick building 42x89 feet for Mrs. M. B. Hill after plans by O. J. Lorehn; cost \$12,000.

Houston, Texas.—Store Building.—Edward Hogan of Victoria, Texas, and associates will organize dry goods company with \$250,000 capital stock and erect five-story building.

Houston, Texas.—Dwelling.—Bids are being received for a two-story residence to be erected by Frank Dunn after plans by Cooke & Co.

Houston, Texas.—Building.—J. M. Dorrance will erect a four-story brick building 50x125 feet.

Houston, Texas.—Warehouse.—John Stadman has contract to erect warehouse for Bering-Cortes Hardware Co. after plans by F. S. Glover; four stories, 165x100 feet; brick; cost \$30,000.

Houston, Texas.—Terminals.—Chartered: Long Reach Land Co., with \$110,000 capital stock, and Edgar Watkins, president; H. W. Cortes, vice-president; S. O. Cotton, secretary, and Edward Kennedy, manager. The company has secured a half-mile of waterfront property on which to construct a system of tracks for the use of all rail lines, extensive wharves, etc.

Hechester, Md.—College Building.—Baldwin & Pennington, 600 Professional Building, Baltimore, Md., are preparing plans for assembly hall and additions and alterations to be made to St. Charles College; new building to be two stories, 51x105 feet, of granite with cut-stone trimmings.

Jacksonville, Fla.—Building.—Bids will be

opened April 30 for a two-story building, 32x44 feet, of sand-lime brick, to be erected by P. F. Wilson at a cost of \$3000. W. B. Camp prepared the plans.

Jacksonville, Fla.—Hotel.—H. J. Klutho has completed plans for six-story brick and stone hotel to be erected by the Anheuser-Busch Brewing Association of St. Louis, Mo. Electric elevators will be installed.

Jacksonville, Fla.—Building.—Robert P. Nelms has secured permit for the erection of proposed two-story brick building 40x65 feet.

Jefferson City, Mo.—Building.—The fireproofing of the Supreme Court building throughout is being considered. It is estimated that about \$180,000 will be required. Governor Joseph W. Folk is chairman of the commission.

Kansas City, Mo.—Dwelling.—W. B. Fall has completed plans for a three-story residence 65x90 feet of brick with limestone trimmings, to be erected by Alfred Toll at a cost of \$10,000. A garage 21x56 feet will be built in rear.

Kansas City, Mo.—Flat Building.—Matt O'Connell has completed plans for two four-story brick flat buildings to be erected by Mrs. Maud C. Weston at a cost of \$60,000.

Keytesville, Mo.—Jail Building.—Plans by H. W. Hoel, 1315 Arlington avenue, St. Louis, Mo., have been adopted for proposed jail building for Chariton county; press brick and stone with slate roof and concrete floors.

Knoxville, Tenn.—Store and Office Building.—Dr. Howard A. Tjams is having plans prepared for a five-story store and office building 50x125 feet and costing \$30,000.

Knoxville, Tenn.—Warehouse.—Trustees of the Swenson estate are having plans prepared for a five-story warehouse.

Lafayette, Ala.—Hotel.—It is proposed to erect hotel. W. B. Wood can give information.

Lake City, Fla.—Clubhouse.—Local lodge of Elks has adopted plans for the erection of proposed \$10,000 clubhouse.

Lakeland, Fla.—Church.—Talley & Glaser, 67 Kentucky Building, are preparing plans for a church, 68x190 feet, of brick and limestone, costing \$15,000. Rev. Mr. Cason is chairman of building committee.

Lexington, Ky.—Depot.—It is reported that plans have been completed for three-story brick and stone depot 50x200 feet to be erected by the Queen & Crescent Route. F. J. Conn, Lexington, is superintendent of bridges and buildings.

Little Rock, Ark.—Dwellings.—C. J. Shay has contract to erect two two-story veneered-brick residences with slate roofs for James Fones, each to cost \$6000.

Lockhart, Texas.—School Building.—City contemplates issuing \$15,000 of bonds for erecting school building. Address The Mayor.

Louisville, Ky.—Courthouse Improvements. Bids marked "Proposals for Fireproofing and Altering Courthouse" and addressed to the Fiscal Court of Jefferson county, Kentucky, will be received at the clerk's office until April 16 for the fireproofing and alterations in the Jefferson county courthouse according to plans and specifications, which can be seen at office of Brinton B. Davis, architect, 505 Masonic Building, or at the office of the chairman of the courthouse committee, Magistrate Edward D. O'Connor, 323 6th street. A certified check for 10 per cent. of amount of bid, made payable to L. B. Water, treasurer, must accompany each bid. Form of proposal will be furnished by architect. Usual rights reserved.

Louisville, Ky.—Warehouse.—Belknap Hardware & Manufacturing Co. has permit to erect proposed warehouse; 10 stories, 184x175 feet; reinforced-concrete construction; cost \$250,000.

Lufkin, Texas.—Theater.—L. S. Green, Houston, Texas, is preparing plans for theater, 65x110 feet, of ordinary construction, to be erected by the Lufkin Theater Co. at a cost of \$30,000. Steam heat and electric lights will be installed.

Marlinton, W. Va.—School Building.—Town will erect an eight-room brick school building. Plans have not been adopted; Andrew Price, president board of education.

Marlinton, W. Va.—Store Building.—Contract will be let May 1 for the erection of store building for the Greenbrier Jewelry Co., mentioned last week; two or three stories, of brick, 45x50 feet; ordinary construction; hot-water or steam-heating plant; electric fixtures; cost \$9000.\*

Memphis, Tenn.—School Building.—Arrangements will be made for rebuilding the Levi High School near Nashville recently burned; Dr. N. F. Ralnes, T. M. Brown and W. A. Gummer, directors.

Memphis, Tenn.—Hotel.—Chighizola, Hanker & Cairns are preparing plans for a three-story brick addition, 80x200 feet, to the Fransiola Hotel, Philip Fransiola, proprietor;

cost \$55,000. Steam-heating plant will be installed.

Memphis, Tenn.—Hotel.—Luehrmann Hotel Co. has had plans prepared for a 14-story hotel 37½x145½ feet.

Memphis, Tenn.—Dwellings.—E. B. Causey has purchased a tract of land comprising 40 lots, and will arrange for the erection of 40 residences.

Memphis, Tenn.—Warehouse.—Plans by Shaw & Pfeil have been adopted for four-story brick warehouse previously reported to be erected by Lee Bros.; cost \$75,000.

Middlesboro, Ky.—School Building.—Town will issue \$15,000 of bonds for the erection of a high-school building. Address Town Clerk.

Milledgeville, Ga.—School Building.—Atlanta Fireproofing Co., Atlanta, Ga., has contract at \$27,200 for the erection of school building; plans and specifications on file at office of W. & J. Parker, 701 Crawford street, Portsmouth, Va.; Western Branch School Board, R. Lee Parker, clerk.

Mineral Wells, Texas.—Flat Building.—P. H. King is having plans prepared by Smith & Schenk, Fort Worth, Texas, for a flat building.

Monroe, La.—Hotel.—H. Bernhardt will erect a five-story hotel; pressed brick with iron frame; terra-cotta trimmings; cost \$90,000.

Montgomery, Ala.—Store Building.—Hobbie & Teague have secured permit for the erection of proposed four-story brick building to cost \$35,000; to be of yellow brick with ornamental cornices. Three elevators will be installed.

Moundsville, W. Va.—Theater.—John W. Burchinal and others have had plans prepared for a \$25,000 theater.

Nashville, Tenn.—Chapter house.—United Daughters of Confederacy are arranging for the erection of proposed \$25,000 chapter house; Mrs. Mark S. Cockrill, president of Nashville Chapter House, chairman building committee.

Nashville, Tenn.—Theater.—J. B. McElfartick of New York, N. Y., is preparing plans for theater to be erected by the Theatrical Building Co. at a cost of about \$75,000.

Nashville, Tenn.—Store Building.—J. A. Williams is preparing plans for five-story brick, iron and stone building to be erected by Norman Kirkman and occupied by Montgomery & Co. Two electric elevators, one freight elevator and automatic sprinklers will be installed.

New Orleans, La.—Store Building.—Kraus Company has had plans prepared for the erection of a five-story addition 128x32 feet to store building.

New Orleans, La.—Store Building.—Bids will be received until April 23 for erection of 15-story building for the Maison Blanche Company, previously reported. Stone Bros. prepared the plans.

New Orleans, La.—Bank and Office Building.—Security Bank & Trust Co. is completing arrangements for the erection of proposed seven-story building; steel frame; fireproof construction; 49x109 feet; cost \$150,000.

New Uim, Texas.—Bank Building.—New Uim State Bank, recently organized with E. C. Find, president, will erect building.

Norfolk, Va.—Cotton Warehouses, etc.—Betts-Hayden Construction Co. has contract to erect cotton warehouses and docks for the International Compress Co., replacing buildings recently reported burned.

Norfolk, Va.—Railway Depots, etc.—There have been various reports current regarding the purposes for which H. H. Manley of New York was optioning certain real estate properties in Norfolk recently. It is now stated that the principal in these purchases is the Tidewater Railway Co., which will use the lands acquired as the site for its proposed freight depot, passenger station and other terminal facilities. Possibly \$500,000 will be the cost of the structures. Further and more exact facts will doubtless be announced by the company's officials at the proper time. H. Fernstrom is the company's chief engineer.

Ocala, Fla.—Hospital.—Marion County Hospital Association, Benjamin Rheinauer, president, is arranging for the erection of proposed hospital.

Oklahoma City, O. T.—Store Building.—Kerfoot, Miller & Co. have purchased site 75x110 feet on which to erect a five-story building.

Parkersburg, W. Va.—School Building.—Board of Education, George D. Heaton, secretary, will receive plans and specifications until April 27 for a six-room brick and stone school building with all modern conveniences; plans to be complete in every respect excepting furniture and blackboards. Usual rights reserved.

Pineacres (P. O. Waresboro), Ga.—Hotel and Cottages.—Otis A. Miller will erect 26-room frame hotel and four and six-room cottages; cost \$15,000.

Pine Bluff, Ark.—Courthouse Improvements.—Courthouse Commissioners, care E. J. Kerwin, chairman, Pine Bluff, Ark., will receive bids until April 21 for furnishing all labor and material required in remodeling and erecting an addition to the Jefferson county courthouse in accordance with plans and specifications which can be seen after March 31 at office of county clerk, Pine Bluff; W. H. Langford and Arthur Murray, commissioners, Pine Bluff, and at office of Gibb & Sanders, architects, Little Rock, Ark. Certified check for \$1000 made payable to E. J. Kerwin, chairman, must accompany each bid. Separate bids will be received for steam heating, electric wiring and plumbing. Usual rights reserved.

Portsmouth, Va.—School Building.—Bids will be opened April 15 at county treasurer's office for erecting a three-story brick school building; plans and specifications on file at office of W. & J. Parker, 701 Crawford street, Portsmouth, Va.; Western Branch School Board, R. Lee Parker, clerk.

Raleigh, N. C.—Amusement Park.—Raleigh Athletic Park Co. has been incorporated with \$25,000 capital stock by Dr. D. E. Everett, Dr. J. R. Rogers and associates to establish amusement park.

Richmond, Va.—Theater.—Rooney & Atkinson have contract to erect the Bijou Theater building; Jake Wells, manager; cost \$50,000.

Rome, Ga.—Store Building.—Lanham & Sons will erect three-story building 61x132 feet, equipping with steam heat, electric elevator and cost \$20,000; Southern Foundry Co., architects.\*

Roanoke, Va.—Dwellings.—Crystal Springs Company is reported to erect 12 houses in South Roanoke at a cost of \$3000 each.

Runge, Texas.—Church.—Baptist congregation will erect brick edifice 50x75 feet at a cost of \$4000. Address The Pastor.

Sanderson, Texas.—Courthouse and Jail Building.—Terrell county has voted affirmatively the proposed \$30,000 bond issue for erecting courthouse and jail. Address County Judge.

Siloam Springs, Ark.—Hotel.—Connelly Harrington and C. P. Moulton will organize the Siloam Springs Hotel Co. with \$50,000 capital stock to erect hotel.

Silver Creek, Miss.—Hotel.—F. L. Peck, C. P. Davidson of Scranton, Pa., and associates are organizing a stock company for the erection of modern hotel. Bidders can receive plans and specifications from Thomas M. Ferguson, Hattiesburg, Miss.

South Norfolk, Va.—Church.—A. Johnson & Co. have contract to erect edifice for the Christian congregation; frame with brick foundation, 24x56 feet, and costing \$5000.

Sparta, Ga.—Church.—Methodist congregation contemplates erecting \$15,000 edifice. Address The Pastor.

Spartanburg, S. C.—Church.—Architect has not been selected to prepare plans for edifice reported recently to be erected by Main Street Methodist Church; ordinary construction; steam heat; electric lights; cost \$30,000; J. W. Nash, chairman building committee.

Spencer, Tenn.—College.—Trustees of Burritt College are arranging to rebuild structure recently reported burned; three stories, 56x96 feet; cost \$15,000; W. V. Freiley, secretary of building committee.

Staunton, Va.—Hotel.—Staunton Realty Corporation has contract to erect hotel for the Augusta Hotel Corporation, recently mentioned; brick, five stories, 100 feet front; two wings with depth 115 feet and 127 feet, respectively; steam heat; electric and gas lights; electric passenger elevator and hand-power freight elevator; cost \$40,000; B. L. Partlow, architect.

Staunton, Va.—Store Buildings.—Henry Witz of Joyner, Witz & Co., 36 Hopkins Place, Baltimore, Md., is having plans prepared by J. B. Crawford, 114 South Broadway, Baltimore, Md., for the erection of three-story building 65x145 feet; brick and stone; steel beams; tin roof; galvanized cornice; skylights; electric wiring; plumbing; steam heat; prism glass; cost \$15,000. Building will contain three store buildings.\*

St. Louis, Mo.—Coliseum.—It is reported that Ralph Orthwein, J. V. S. Barret, Lyman T. Hay, Edwin Lemp and associates will erect a coliseum at a cost of \$300,000.

St. Louis, Mo.—Office Building.—Mercantile Trust Co. has completed arrangements for the erection of proposed nine-story addition 21x109 feet to building; cost \$100,000.

Tanners Creek, Va.—School Building.—Charles F. Harper of Pinner's Point, Va., has contract at \$7000 for the erection of proposed brick school building.

Tifton, Ga.—School Building.—S. N. Adams has contract at \$23,575 for the erection of

school building previously mentioned; Lockwood Bros., Columbus, Ga., architects.

Washington, D. C.—Club Building.—Washington Lodge No. 15, Benevolent and Protective Order of Elks, 1006 E street N. W., will erect new club building on H street between 9th and 10 streets N. W., to cost about \$100,000. Competition among architects to select design for the building is now being held; building committee, Richard A. O'Brien, chairman; Lorenzo A. Bailey, secretary, and Michael G. McCormick.

Washington, D. C.—Bank and Office Building.—The Union Trust Co., Edward J. Stellwagen, president, 1414 F street N. W., has commissioned Wood, Donn & Deming, architects, 808 17th street, to prepare plans and specifications for office building recently reported to be erected at southwest corner 15th and H streets N. W.; eight stories, 53.8x161 feet; brick with stone trimmings; fireproof construction; electric wiring and fixtures; sanitary plumbing; steam-heating system; elevators; cost about \$300,000.

Washington, D. C.—Office Building.—Swartzell, Rheem & Hensley, real estate brokers, 916 F street N. W., have commissioned Paul J. Pelz, architect, Corcoran Building, 15th and F streets N. W., to prepare plans and specifications for one-story fireproof office building at 723 and 725 15th street N. W.

Washington, D. C.—Bank Building.—Union Savings Bank, 14th street and New York avenue N. W., has awarded contract to Parker & Bowersox, builders, Anacostia, D. C., for the construction of branch bank building to be erected at Anacostia, D. C.; two stories, 40x53 feet; brick with stone trimmings; gas fixtures; steam-heating system; B. Frank Meyers, architect, Bond Building, 14th street and New York avenue N. W.

Washington, D. C.—Apartment-house.—Thomas H. Pickford, 1410 G street N. W., will erect apartment-house at 2123 18th street N. W.; four stories, 40x129 feet; brick with limestone trimmings; slag roof; electric wiring and fixtures; sanitary plumbing; steam-heating system; cost about \$35,000; W. J. Simmons, architect, 1110 G street N. W.

Washington, D. C.—Dwelling.—Alonzo A. Bliss, Bliss Building, 35 B street N. W., has awarded contract to W. E. Speir Company, builders, 1312 New York avenue N. W., for the construction of dwelling on 16th street N. W.; four stories, 25x85 feet; brick with stone and terra-cotta trimmings; electric wiring and fixtures; sanitary plumbing; heating system; cost about \$30,000; A. Goener, architect, Bliss Building, 35 B street N. W.

Washington, D. C.—Dwellings.—Thomas H. Melton, 19 T street N. W., will erect nine dwellings on 3d street N. E.; three stories; brick with stone trimmings; tile roofing; electric wiring and fixtures; sanitary plumbing; hot-water-heating system; cost about \$45,000; N. R. Grimm, architect, 627 F street N. W.

Washington, D. C.—Church.—Revised bids are being taken on construction of building for Rhode Island M. P. Church, John M. Gill, pastor, 36 Rhode Island avenue N. W., to be erected at Rhode Island avenue and 1st street N. W.; one story, 40x80 feet; brick with stone trimmings; slate and tin roof; electric wiring and fixtures; sanitary plumbing; steam-heating system. W. E. Speir Company, 1312 New York avenue N. W.; S. J. Prescott & Co., 700 13th street N. W.; Charles A. Langley, 310 12th street N. W.; Boyer & Smith, 1296 C street N. W.; Wm. C. Morrison, 1415 Rhode Island avenue; R. A. Morrison, 1173 Rock Creek road; George C. Hough, 619 14th street N. W., and John McGregor, 729 12th street N. W., are estimating; bids to be in April 2; Harding & Upman, architects, 729 15th street N. W.

Washington, D. C.—Stores and Apartments.—Lawrence Watson will erect three store buildings and apartments on H street between 13th and 14th streets N. W.; three stories, 48x69.2 feet; brick with limestone trimmings; galvanized-iron cornices; tin roofing; electric wiring and fixtures; sanitary plumbing; steam-heating system; Albert M. Schneider, architect, 329 Bond Building, 14th street and New York avenue N. W.

Washington, D. C.—Dwelling.—Robert J. Fisher, 614 F street N. W., has awarded contract to Wm. P. Lipscomb & Co., 1405 F street N. W., for remodeling and erecting an addition to dwelling at 1915 Kalorama road N. W.; addition to be three stories, 20x23 feet. Electric wiring and fixtures, sanitary plumbing and heating system will be installed; cost about \$6500; Wm. M. Poindexter, architect, 806 17th street N. W.

Washington, D. C.—Dwelling.—Samuel Stewart, 311 Pennsylvania avenue N. W., has awarded contract to Jacob Reeder, 235 Pennsylvania avenue N. W., for the construction of two-story and basement brick and stone dwelling at 1017 4th street N. W., to cost about \$6000. Steam-heating system will be

installed; W. Sidney Pittman, architect, 494 Louisiana avenue N. W.

Washington, D. C.—Theater.—The National Amusement Co. has been incorporated with a capital stock of \$100,000 to erect theater; Samuel Stewart, president, Southern Hotel, 311 Pennsylvania avenue N. W.

Washington, D. C.—Dwellings.—B. W. Guy, 313 9th street N. W., is now taking bids for the construction of two two-story brick and stone dwellings with tin roofs and galvanized-iron cornices on Madison street between 6th and 7th streets.

Washington, D. C.—Dwelling.—Walter F. Collins, 614 G street S. E., has awarded contract to Robert C. Hess, builder, 17 Tennessee avenue N. E., for the construction of four two-story brick and stone dwellings at 11th and G streets S. E. Hot-water-heating system will be installed; C. E. Webb, architect, Warder Building, 523 9th street N. W.

Washington, D. C.—Store Building.—Dr. Charles A. Becker, 1434 E street S. E., will erect store building on Brightwood avenue, Fourteenth Street Heights.

Washington, D. C.—Suburban Development.—B. F. Edwards of the Edwards Building and Loan Association, 717 12th street N. W., with associates, has purchased 37 acres of land in northeastern suburbs which will be developed for residential purposes.

Washington, D. C.—Dwelling.—Daniel G. Fairchild, 1331 Connecticut avenue N. W., has commissioned George O. Totten, Jr., architect, 808 17th street N. W., to prepare plans and specifications for dwelling to be erected at Chevy Chase.

Washington, D. C.—Dwelling.—B. Stanley Simmons, architect, 931 F street N. W., is preparing plans and specifications for 2½-story brick and stone dwelling 21x75 feet to be erected on Le Roy Place near Connecticut avenue.

Washington, D. C.—Store Buildings.—T. A. Wickersham, Colorado Building, 14th and G streets N. W., as agent for Thomas F. Walsh, will make extensive alterations and additions to store buildings at 1321 and 1323 G street N. W.

Washington, D. C.—Telephone Exchange.—The American Telephone & Telegraph Co., 722 12th street N. W., has purchased lot on 13th street between G and H streets N. W., and will erect exchange on the site, which is 45x155 feet, to connect with its present building on 12th street. Eldlitz & McKenzie, architects, 1123 Broadway, New York, will probably prepare the plans and specifications for the building.

Washington, D. C.—Laboratory.—The Carnegie Institution, Robert S. Woodward, president, Bond Building, 14th street and New York avenue N. W., has purchased five acres of land on Peirce Mill road near Massachusetts avenue for the site for laboratory to cost about \$125,000.

Washington, D. C.—Apartment-house.—Franklin T. Sanner, 18th street and Columbia road N. W., has purchased lot on U street between 17th and 18th streets N. W., and will erect large apartment-house on the site, which is 57x100 feet.

Washington, Ga.—Church.—Bids are being received for the erection of brick church. Address B. S. Irvin.

Washington, D. C.—Telephone Exchange.—The Chesapeake & Potomac Telephone Co., 722 12th street N. W., will erect telephone exchange on B street N. E.; three stories, 45x130 feet; brick with stone base and terra-cotta trimmings; steel beams and girders; cast-iron columns; fireproof construction; electric wiring and fixtures; sanitary plumbing; heating system; elevator; Eldlitz & McKenzie, architects, 1123 Broadway, New York. Estimates on construction are now being taken. John McGregor, 729 12th street N. W., being among those bidding.

Waycross, Ga.—College Buildings.—Plans have been completed for the erection of main building at the Baptist College; to be two stories of brick and cost \$20,000. Work on the construction will shortly begin. Plans for the two dormitories to be erected at a cost of \$10,000 have not been completed. Address The President.

West Palm Beach, Fla.—School Building.—City will vote April 23 on \$20,000 bond issue for the erection of school building. Address The Mayor.

West Tampa (P. O. Tampa), Fla.—Bank Building.—Fred James is preparing plans for building to be erected by the West Tampa Bank.

Wheeling, W. Va.—Dwelling.—Bids will be opened March 29 for residence reported last week to be erected by F. R. Scroggins after plans by George S. Mooney & Co.; two-story stone and brick; slate roof; hot-water-heating plant; gas and electric fixtures; cost \$10,000.



Wilmington, N. C.—Store Building.—John H. Brunjes will erect five-story building 63x97 feet, to be occupied by I. M. Bear & Co. Steam heat, electric and gas fixtures will be installed.

Wilmington, N. C.—Store Building.—D. Hannah has contract to erect two-story brick store building for F. H. Krahnke after plans by H. E. Bonitz.

Windsor (P. O. Windsor Station), Va.—Bank Building.—James W. Babb, George W. Turner, W. J. Rhodes, committee, are receiving specifications and bids for the erection of brick bank building 20x40 feet and vault 6x5 feet. Information furnished on application.

Woodlawn, Ala.—Church.—First Methodist congregation will erect brick edifice 60x150 feet at a cost of \$10,000. J. T. Morris is pastor.

Woodstock, Va.—Jail and Sheriff's Residence.—Glaze & Co., Winchester, Va., have contract for the erection of jail and sheriff's residence, previously reported. Holmboe & Lafferty, Clarksburg, W. Va., prepared the plans.

## RAILROAD CONSTRUCTION.

### Railways.

Aberdeen, Miss.—Mr. W. J. Harahan, fourth vice-president of the Illinois Central Railroad, writes from Chicago to the Manufacturers' Record concerning a recent press report that the company would survey from Aberdeen to Nashville, Tenn. He says that the company is not now contemplating a survey between those points.

Alexandria, La.—Reported that the Louisiana & Arkansas Railroad has completed about 10 miles of its extension from Packton, La., towards Alexandria. Grading is completed as far as Tioga, 20 miles more. G. Knobel is chief engineer at Jena, La.

Alva, O. T.—The College City & Southern Railway Co. has been chartered to build a line from Kiowa, Kan., to Alva, O. T., 35 miles. The directors are E. T. McKnight, president and general manager; T. G. Woodward, first vice-president; J. B. Kent, second vice-president; W. B. Taylor, secretary and treasurer, and J. B. Doolin, all of Alva.

Ashland, Ky.—Eugene Zimmerman of New York, president of the Detroit, Toledo & Ironton Railway, is reported as saying that construction of the proposed line of that company into the Eastern Kentucky coal fields will be started during the coming summer and that it will be operated in connection with the Ironton and Ashland bridge when that is completed. He is further reported as saying that he expects both the bridge and the railroad extension to be finished within a year.

Austin, Texas.—William G. Carroll of New York is representing Eastern capital in connection with the proposed electric interurban railway between Austin and Lockhart, Texas.

Baltimore, Md.—The Fidelity Construction Co. of Detroit, Mich., has been awarded the contract to build the line of the Washington, Baltimore & Annapolis Electric Railway Co. from Baltimore to Washington, about 32 miles. George T. Bishop is president, and J. G. Masterton, secretary of the railway, at 801 Maryland Trust Building, Baltimore.

Baltimore, Md.—The Baltimore & Ohio Railroad Co. informs the Manufacturers' Record that there is nothing in the report that the company contemplates enlarging its yard in the southern part of Cumberland, Md.

Barboursville, W. Va.—Reported that the Chesapeake & Ohio Railway has awarded a contract for a 40-mile cut-off between Lewis and Barboursville to Langhorne & Co. of Richmond, Va. D. A. Allen of Barboursville has a subcontract on the work.

Bartlesville, I. T.—Rights of way are being obtained for the proposed railway from Bartlesville to Dewey, four miles. The Bartlesville Interurban Railway Co. is to build the line.

Baton Rouge, La.—D. H. Bartlett and a corps of engineers are reported to be making a survey for a new railroad from Baton Rouge to Hammond, La. The name of the company is not stated.

Beaumont, Texas.—The Texas Grading Co. of Houston, Texas, J. M. Griswold, president, has been awarded the contract for the Burr's Ferry, Brownell & Chester Railroad. P. G. Omohundro is chief engineer at Beaumont.

Birmingham, Ala.—C. H. Ackert, fourth vice-president of the Southern Railway, is quoted as saying that construction of the proposed union station at Birmingham will begin as soon as material can be received. George B. McCormack is president of the Terminal Company. The new station will extend from Second to Seventh avenue between 26th and 27th streets.

Birmingham, Ala.—Construction of the new union station has been started by Brown & Jones, local contractors for the grading. Walter H. Harrison is engineer in charge.

Bowling Green, Ky.—The Bowling Green & Western Railroad Co. has filed incorporation articles to build its proposed line from Bowling Green to Horse Branch. The officers are: B. F. Procter, president; E. P. Neale, first vice-president; W. A. Helm, second vice-president; C. D. Herdman, secretary and treasurer; Roy Cooksey, assistant secretary and treasurer. The Leber-Cole Company of New York city will, it is reported, finance and build the road, which will be about 50 miles long.

Brownsville, Texas.—Col. Uriah Lott, projector of the Brownsville, Hidalgo & Northern Railroad, is reported as saying that the survey is being made in the direction of Galveston, and that as soon as it is completed to Hidalgo contracts will be let.

Burnsville, N. C.—The Southern Railway has, it is reported, finished a survey for its Johnson City Southern line from Johnson City, Tenn., via Burnsville to Marion, N. C., and construction has begun on Cane river.

Cape Charles, Va.—The Cape Charles Railroad Co. has been incorporated to build a line 15 miles long in Northampton county. The incorporators are officers of the New York, Philadelphia & Norfolk Railroad, as follows: William A. Patton, president; O. J. DeRousse, secretary, and J. G. Cassatt, treasurer.

Carrollton, Texas.—Reported that the Frisco system will build a line from Carrollton to Irvin, 10 miles, to connect with the Rock Island, and that J. S. Peter, chief engineer of the Rock Island at Fort Worth, Texas, is making a survey.

Charleston, W. Va.—One of the incorporators of the Carnifex & Eastern Railway, chartered to build a line from Carnifex Ferry to Lewisburg, informs the Manufacturers' Record that the survey for this road is to provide a route that will be used in connection with other roads in which they are interested. This includes the Kanawha & West Virginia and other lines.

Charlotte, N. C.—Reported that the Southern Power Co., which has completed a railway from its power plant at the Great Falls of the Catawba to a connection with the Lancaster & Chester Railway, will further extend it northward to connect with the Seaboard Air Line, and thence to Rock Hill to connect with the Southern Railway, the latter point being about 30 miles from Great Falls.

Chattanooga, Tenn.—Reported that the Queen & Crescent will make extensive improvements to the Chattanooga Belt line. W. A. Garrett is general manager at Cincinnati, Ohio.

Chattanooga, Tenn.—The Illinois Central Railroad will, it is reported, build an extension from Nashville to Chattanooga along the route proposed by the McMinnville, Woodbury & Nashville Railroad, a projected electric line. A. S. Baldwin is chief engineer at Chicago.

Corsicana, Texas.—H. E. Terry, chief engineer of the Central Texas Traction Co., is reported as saying that contracts will be let soon for its proposed line from Corsicana to Palestine and Fairfield, 74 miles. J. V. Watkins of Corsicana is president.

Cumberland, Md.—J. Q. Barlow, chief engineer of the Western Maryland Railroad, is reported as saying that the company will construct large yards at Ridgely, W. Va., opposite Cumberland, where it is about to purchase 65 acres of land.

Dallas, Texas.—Concerning the report that the Missouri, Kansas & Texas Railway was making a survey from Palestine to Dallas, an official of the company informs the Manufacturers' Record that the railroad corporation is not now making any surveys in Texas.

Darien, Ga.—The Darien & Western Railroad has amended its charter changing its name to the Georgia Coast & Piedmont Railroad. An extension may be made. H. D. Emerson is vice-president and general manager at Darien.

Davis, I. T.—The citizens have raised a bonus of \$10,000 for the proposed railroad from Davis to Turner Falls, and it is said that the Missouri Construction Co. will complete the line, six miles long, within three months.

Durham, N. C.—The Durham & Southern Railroad, which proposes to begin operation of its line on about April 15, has elected directors as follows: B. N. Duke, Angler B. Duke, George W. Watts, C. W. Toma, W. A. Erwin, J. B. Mason, F. L. Fuller, R. I. Cheatham, Lawrence S. Holt and J. E. Stagg.

Elberton, Ga.—Reported that application has been made to charter the Hartwell & Washington Railroad, 56 miles long, and to

connect Hartwell, Elberton and Washington, Ga. Residents of each place are interested.

Eureka Mills, Va.—Reported that Col. Robert Hubbard of Buckingham proposes to build a railroad, for which a survey has just been completed from Rosney, to connect with the Tidewater Railway three miles east of Abilene. It is said that the old roadbed of the proposed Orange & Keysville Railroad, 11 miles long, will be used in building the line.

Fayetteville, W. Va.—Contract for the Fayette & Fayetteville Railroad has been let to King, Killough & Co. of Philadelphia. The line will be about two and one-half miles long and will be operated by electricity.

Gallatin, Tenn.—The incorporation of an electric railway company to build a line from Stanford, Ky., to Gallatin, Tenn., is reported, the route being through the towns of McKinney, Liberty, Burkesville and Tompkinsville, Ky., and Red Boiling Springs, La-fayette and Hartsville, Tenn. The incorporators are W. G. Schamberger of Gallatin, J. I. White, Dr. Peyton, Harvey Helms, Judge Bailey and other prominent business men of Stanford, Ky. Construction is to begin in 30 days.

Gassaway, W. Va.—The Gassaway, Elk River & Huttonsville Railroad Co. of Clarksburg has been incorporated to build a line from Gassaway to Webster Springs, W. Va., about 25 miles. The incorporators are T. M. Jackson of Clarksburg, E. B. Carlin and L. H. Kelly of Sutton, J. M. Hoover of Webster Springs and Elihu Hutton of Huttonsville.

Glenn Springs, S. C.—Mr. T. B. Thackston writes the Manufacturers' Record that the Spartanburg & Glenn Springs Southern Railway will receive its commission March 31. The incorporators are J. B. Lee, August W. Smith, V. M. Montgomery, W. S. Montgomery, A. L. White and T. B. Thackston. The line will be about 100 miles long from Spartanburg to Alken, S. C., probably via Clinton, Newberry, Whitmire, Saluda, Edgefield, Johnston and Trenton. Either steam or electricity may be used, possibly both.

Greensboro, N. C.—E. J. Justice, who has been granted a franchise for an electric railway from Greensboro to High Point, is reported as saying that the syndicate he represents is composed of James H. Dawes, vice-president of the American Pipe Co. of Philadelphia; H. Bayard Hodge, secretary of the same concern; J. W. Perry, vice-president of the Citizens' National Bank of Norfolk, Va., and others.

Gulfport, Miss.—An officer of the Gulfport & Mississippi Coast Traction Co. writes the Manufacturers' Record denying the report that extensions to Mobile and New Orleans are contemplated. He says it is without foundation.

Hattiesburg, Miss.—The Mississippi Garden Railroad Co. has applied for a charter to build a line from Hattiesburg to Carthage, Miss., about 100 miles. The incorporators are S. B. Floeter of New Albany, Miss.; G. A. Flater of Toledo, Ohio, and W. F. Floeter of Taylorsville, Miss.

Holden, W. Va.—Reported that the United States Coal & Oil Co. of Holden, or capitalists interested therein, will apply for a charter to build a railroad from the upper Guyan valley to Huntington, W. Va.

Hopkinsville, Ky.—The Louisville & Nashville Railroad is surveying to cut down grades and curves on the Henderson division. W. A. Courtenay is chief engineer at Louisville, Ky.

Houston, Texas.—Construction has begun at La Porte on the Houston-Galveston Interurban Railway. A. C. Workman having the contract. David M. Duller of Houston, the engineer in charge, is pushing work ahead of the graders. J. O. Ross of Houston is president.

Jackson, Ky.—The Southeastern Railway Co. of Kenton county, which proposes to build a line 70 miles long from Jackson, Ky., through Breathitt, Perry, Knott and Letcher counties, was incorporated by Woodson Poor, Gwynne Dennis, A. T. Holcombe, Jr., and L. J. Hoppe, all of Cincinnati, Ohio.

Jackson, Miss.—Reported that engineers have taken the field to make a survey from Birmingham, Ala., to Baton Rouge, La., for the proposed Birmingham & Mississippi Southern Railway, lately incorporated by A. H. Longino and others.

Kansas City, Mo.—A stockholders' meeting of the Kansas City Southern Railroad has approved the issue of additional securities amounting to \$10,000,000 to provide for repairs, improvements, new tracks, etc. A. F. Rust is resident engineer at Kansas City.

Kansas City, Mo.—The Kansas City-Belton Railway Co. has been incorporated to build a line 28 miles long from Kansas City southeast to Belton, Mo. Among those interested are Walter J. Bales, Webster Withers, Jr.,

Judge Turner A. Gill, E. S. Yeomans, P. D. Ridenour, Dr. W. E. Minor, W. S. Cowherd, Frank G. Robinson and Lee Dunlap, all of Kansas City; George W. Scott and H. A. Mastin of Belton. Officers have been elected as follows: Walter J. Bales, president; George W. Scott, a banker of Belton, vice-president, and Webster Withers, Jr., secretary and treasurer. Gasoline motor cars are to be used.

Knoxville, Tenn.—The Knoxville & Eastern Railway Co. has applied for a charter to build a steam railroad from Knoxville eastward through Knox, Grainger and Hawkins counties to a point near or at Yuma, Va., about 100 miles. The incorporators are Wm. M. Epps, J. Cal. Sterchl, Noland Willard, J. Wylie Brownlee and Henry G. McMillan.

Knoxville, Tenn.—The Louisville & Nashville Railroad has opened its line for freight service between Etowah, Tenn., and Cartersville, Ga.

Knoxville, Tenn.—James B. Wright is reported as saying that surveys for the proposed Holston River Railway, of which he is president, will be completed before April 1, and soon after that contracts will be let. The line is from Yuma, Va., on the Virginia & Southwestern Railroad at Moccasin Gap to a point south of Persia, Tenn., about 45 miles. Persia is three or four miles west of Rogersville, Tenn., on the Southern Railway.

Lauderdale, Miss.—The Lauderdale & Northwestern Railroad Co. has applied for a charter to build a narrow-gauge line from Lauderdale to Kemper Springs, about 10 or 12 miles. The incorporators are J. E. Tartt, lumber manufacturer, of Lauderdale; George D. Neville and R. E. Willbourn of Meridian, Miss.

Lexington, Ky.—Darnell & Simms of Lexington are reported to have taken the contract to grade the new freight-yards of the Chesapeake & Ohio Railway at Walton avenue, on which Dolan Bros. were previously working.

Lumberton, N. C.—Interests controlling the Aberdeen & Rockfish Railroad Co. have proposed to build a line from Lumberton to connect with the Atlantic Coast Line, asking a bond subscription. John Blue is president of the company at Aberdeen, N. C.

Macon, Mo.—A movement is under way to build an interurban electric railway from Macon via College Mound to Huntsville, Mo. Capt. C. J. DuBois of La Belle, Mo., may be able to give information. Captain DuBois is chief engineer of the proposed motor line from La Belle to Shelbyville, Mo.

Madisonville, Ky.—The Kentucky Valley Railroad Co. has completed its line from Whentcroft to Providence, about seven miles, connecting with the Illinois Central.

McKinney, Texas.—Reported that construction has begun on the proposed line of the Texas, New Mexico & Pacific Railway from McKinney to Denton, Texas, and thence to Roswell, N. M. Callahan & Fry have the first contract, the Rock Island Construction Co. being the general contractor.

Melville, La.—The Opelousas, Gulf & Northwestern Railway Co., which proposes to build from Melville southwest to Crowley, La., 60 miles, has filed a mortgage to secure \$5,000,000 of bonds to the Mercantile Trust Co. of New York. Thomas H. Lewis of Opelousas, La., is president of the railway.

Meridian, Texas.—N. R. Morgan, secretary of the Gulf & Northwestern Railway, is reported as saying that contracts will be let about May 15 or perhaps sooner for the proposed line from Waco to Stephenville and Strawn, Texas, 125 miles. Survey is complete. James B. Baker is president at Waco, Texas, and P. A. McCarthy is chief engineer at Lufkin, Texas.

Middlesboro, Ky.—Reported that M. S. Callison of Middlesboro has been awarded the contract for five or six miles of second-track construction on the Louisville & Nashville Railroad between Flat Lick and Artemus, Ky.

Mineral Wells, Texas.—C. E. Brown will, it is reported, make a preliminary survey for the proposed extension of the Weatherford, Mineral Wells & Northwestern Railway.

Mississippi City, Miss.—Reported that the Mississippi Central Railroad will establish a southern terminal at this point. James Archibald is chief engineer at Hattiesburg, Miss.

Morgantown, W. Va.—The Sabraton Railway Co. having built a line from Morgantown to Sabraton, has applied for a franchise for an electric railway from Sabraton to Point Marion, Pa., nine miles. R. L. Morris is president.

Mt. Sterling, Ky.—The Ohio & Licking River Railway Co. has filed incorporation articles to build a line about 60 miles long from a point in Fleming county, on the Louisville & Nashville Railroad, to a point in Rowan county where Triplett creek joins the Lick-

ing river, and thence to a point in Morgan county. Woodson Poor of Cincinnati, Ohio; R. H. Winn of Mt. Sterling and Robert Young of Farmer, Ky., are the incorporators. One of those interested informs the Manufacturers' Record that the new company will build an extension to the present Licking Valley Railway, and both will be made standard gauge.

New Iberia, La.—Contracts have been let for 25 additional miles of grading on the railroad promoted by C. C. Henshaw to run from Leesville to New Orleans. Five miles of grade are already reported finished.

Norfolk, Va.—Mr. Raymond DePuy, general manager of the Tidewater Railway Co., is quoted as saying that the company has purchased through R. F. Baldwin of Norfolk and H. H. Mandley of New York four acres of land at Maine and Bermuda streets to build the Norfolk terminal of the road. H. Fernstrom is chief engineer at Norfolk.

Norfolk, Va.—An officer of the Tidewater Railway informs the Manufacturers' Record that the Atlantic, Gulf & Pacific Co., Park Row Building, New York city, has the contract for making the fill for a yard and for building a pier on the southern branch of the Elizabeth river, and it is expected to complete the work by July 1. No provision has been made for terminals at Portsmouth, Va.

Paris, Ky.—The Lexington Interurban & Railway Co. will build an extension of its line in Paris; headquarters at Lexington, Ky.

Rogers, Ark.—The Rogers Southwestern Railroad is reported to have finished 10 miles of grading for its line between Rogers and Springtown.

San Antonio, Texas.—The Texas Railroad Co. has filed its charter to build its proposed line from Port O'Connor to New Braunfels, with branches to San Antonio and Seguin, about 200 miles. The line will also connect Seadrift, Victoria, Yoakum and Lavaca. The incorporators are J. P. Barclay, M. Goggan, Nat M. Washer, Fred Cook, W. W. Lipcomb, Marshall Hicks, Thomas S. Goggan, William Aubrey, Thomas L. Conroy, W. C. Riggsby, Theodore Harris, C. H. Florian, J. D. Guinn and M. S. Blackburn, all of San Antonio; R. S. Dilworth, T. F. Harwood, B. N. Peck of Gonzales, W. L. Johnson, H. Roos, J. E. Lander, L. M. Haller, John M. Green, Dan T. Price, Ed B. Caruth of Yoakum, William Green of Shiner, C. S. E. Holland, Theodore Buhler, J. K. Hexter, F. B. Lander of Victoria, Samuel Granat of New York city, Joseph Faust, Harry Landa, William Clemens of New Braunfels, John Sullivan of Oklahoma and E. M. Rowley of Mexico. The directors are M. Goggan, M. S. Blackburn, John Sullivan, C. S. E. Holland, E. M. Rowley, S. Granat and J. M. Holler.

St. Louis, Mo.—The Municipal Bridge and Terminal Commission, which proposes to establish an extensive terminal-railway system in the center of the city, has appointed Albert T. Perkins, superintendent of the St. Joseph division of the Burlington system, to be adviser to the civil engineer of the commission, Robert Moore.

St. Louis, Mo.—An officer of the Frisco system, writing to the Manufacturers' Record, denies the press report that the company is surveying for an extension from Avaré to Fort Supply and Guymon, O. T.

St. Louis, Mo.—Official: The Southern Railway contemplates laying seven additional team tracks at 13th and High streets in Louisville, Ky. Edward Gray is engineer maintenance of way at St. Louis, and the work will be under the charge of A. H. Dodds, assistant engineer at Louisville.

St. Louis, Mo.—The Wabash Railroad has, it is reported, acquired 12 more blocks of property between Luther and Carrie avenues and 2d and Hall streets to be used for terminal purposes. O. A. Cunningham is chief engineer at St. Louis.

Sloan's Valley, Ky.—Mr. G. B. Nicholson, chief engineer of the Cincinnati, New Orleans & Texas Pacific Railway, writes the Manufacturers' Record that the Sloan's Valley Railway, recently incorporated, will run from Sloan's Valley Station in Pulaski county, Kentucky, eastward to the Cumberland river, and up that river to its junction with the Laurel river, a total distance of about 25 miles. Bids for construction have not yet been requested.

Temple, Texas.—Reported that Helland & Werenskiold of Dallas, Texas, are making a survey for the proposed Temple and Marlin traction line. J. C. Houser of the Belton & Temple Traction Co. is said to be interested.

Thurmond, W. Va.—Reported that the Chesapeake & Ohio Railway has let contracts to Swift & Baird for improving the Loup Creek branch, which will include some revision of grades and curves.

Vinita, I. T.—Reported that the Vinita & Northwestern Railway, built by the Osage

Construction Co. for 12 miles west of Vinita, has been bought by the Missouri Pacific Railway, and that the latter has engineers making surveys for several possible extensions. E. F. Mitchell is engineer of construction of the Missouri Pacific at St. Louis.

Wesson, Ark.—The Edgar Lumber Co. writes the Manufacturers' Record confirming the report that it is building the Eldorado & Wesson Railway, and that it has bought 90 acres of land in Eldorado, Ark., for terminal facilities. The line will be standard gauge and will be completed this season for 10 miles. It will connect at Eldorado with the Iron Mountain and the Rock Island roads.

Wheeling, W. Va.—The Steubenville & East Liverpool Railway & Light Co., lately incorporated in Ohio, will, it is reported, insure the completion of an electric railway service between Pittsburg and Wheeling. Among the incorporators are Van Horn Ely, president of the American Electric Railway Association and president of the East Liverpool Traction & Light Co.; Edward McDonnell of Buffalo, J. C. Rothery of Niagara Falls, Charles A. Smith of Pittsburg and George H. Owen of East Liverpool, Ohio.

Wheeling, W. Va.—U. N. Arthur, chief engineer for the proposed Uniontown & Wheeling Short Line, in which J. V. Thompson of Uniontown, Pa., is interested, is reported as saying that active work is to begin not later than June 1.

Wichita Falls, Texas.—Reported that the Missouri, Kansas & Texas Railway will build an extension from Wichita Falls through the Panhandle for about 200 miles. J. W. Petherton is chief engineer at Dallas, Texas.

Winston-Salem, N. C.—O. H. P. Cornell, chief engineer for the proposed Winston-Salem Southbound Railroad, is reported as saying that contracts will be let very soon for the line from Winston-Salem to Wadesboro, N. C., about 80 miles, and that work will begin immediately.

#### Street Railways.

Anderson, S. C.—Reported that the Anderson Traction Co. has awarded to W. O. Willard of Easley, S. C., the contract for grading its line from Anderson to Belton, S. C.

Baltimore, Md.—The United Railways & Electric Co. has applied for a franchise to build a double-track electric railway for a distance of several blocks on German street, and also to make a short extension of a single track on Hanover street.

Baltimore, Md.—The Baltimore Terminal Co. has applied for a franchise to build its proposed double-track line, several miles long, in Baltimore to provide entrance for the Washington, Baltimore & Annapolis Electric Railway, of which George T. Bishop is president, and J. G. Masterton, secretary, at 301 Maryland Trust Building.

Beaumont, Texas.—The Beaumont Traction Co. has, it is reported, agreed to extend its line out Royal street to the Joachim addition, one and one-quarter miles.

Charlotte, N. C.—The Charlotte Electric Railway, Light & Power Co. has, it is reported, decided to extend its line to the Chadwick Mill.

Chickasha, I. T.—E. E. Colby, chief engineer, is reported as saying that contracts will be let about May 1 to build the proposed line of the City Railway Co. M. B. Louthan is president at Chickasha.

Gadsden, Ala.—The Gadsden Railway, Light & Power Co. has been incorporated to build the proposed extensions of the Alabama City, Gadsden & Attalla Railway Co. George H. Schuler of Birmingham is president, and E. T. Schuler is secretary, treasurer and general agent.

Greenville, S. C.—The Manufacturers' Record is informed that James H. Dawes of Philadelphia, general manager of the Greenville Traction Co., says that the company will build a trolley line from Greenville to Belton, S. C., if the line proposed is not constructed.

Macon, Ga.—The Macon Railway & Light Co. proposes to build an extension on the Columbus road.

New Iberia, La.—The Bayou Teche Traction & Power Co. has filed a charter to build a line from New Iberia to Berwick. F. A. Augur is president; H. R. Fine, vice-president; J. T. White, secretary, and Ledoux E. Smith, treasurer.

Norfolk, Va.—Reported that the Norfolk Railway & Light Co. will increase its capital and make improvements. E. C. Hathaway is general manager.

Norfolk, Va.—A stockholders' meeting of the Norfolk Railway & Light Co. is to be held on April 19 to consider proposed extensions and improvements.

Paducah, Ky.—The Paducah Traction Co. has applied to the city council for additional franchises to make several track extensions.

Tampa, Fla.—A street railway franchise has been granted to H. H. Kirkpatrick of Johnson City, Tenn., the line to be on Florida avenue and Lafayette street, and thence to Sulphur Springs. Victor H. Knight is attorney.

Tampa, Fla.—The Tampa Electric Co. has begun an extension along Florida avenue and Lafayette street for the proposed Port Tampa city loop.

Waycross, Ga.—Reported that J. Edward Dempsey will apply for franchise from the city council for the Waycross Electric Street Railway, Light & Power Co. Others associated are J. B. Dempsey and William Peters of Portsmouth, Va.; J. S. Warren of Norfolk, Va., and J. M. O. Duke of Richmond, Va.

#### MACHINERY, PROPOSALS AND SUPPLIES WANTED.

**Manufacturers and others in need of machinery of any kind are requested to consult our advertising columns, and if they cannot find just what they wish, if they will send us particulars as to the kind of machinery needed we will make their wants known free of cost, and in this way secure the attention of machinery manufacturers throughout the country. The Manufacturers' Record has received during the week the following particulars as to machinery that is wanted:**

Agricultural Implements.—C. B. Ford Company, Richmond, Va., wants 200 11-inch cultivator discs, 20 16-inch cultivator discs and 25 pairs of light plow handles; quote prices f. o. b. Richmond.

Air Compressor.—New Albany Compress Co., New Albany, Ind., wants an air compressor for lifting water from an artesian well into a 60-foot tower.

Art Glass.—Rev. I. F. Belts, pastor M. E. Church, South, Bryan, Texas, wants prices on art glass windows.

Bank Fixtures, etc.—P. E. Dennis, Macon, Ga., wants prices on bank and office fixtures, vault equipment, etc., for bank building at Bainbridge, Ga.

Boiler.—See "Engine and Boiler."

Boiler.—Geo. A. Polmar, secretary-treasurer Excelsior Land & Improvement Co., Montgomery, Ala., wants a 100-horse-power boiler. (See "Engine and Boiler.")

Boiler.—Delatte & Lagrange, P. O. Box 544, Lake Charles, La., will shortly want to purchase a 60 or 75-horse-power boiler.

Brick.—W. V. Freiley, secretary building committee of Burrill College, Spencer, Tenn., will let contract for burning brick for \$15,000 building.

Brick Machinery.—People's Lumber Co., Donaldsonville, La., wants addresses of manufacturers of brick machinery.

Brick Machinery.—T. B. Armstrong, R. F. D. No. 2, Decaturville, Tenn., wants brick machinery.

Brick Machinery.—Miller-De Vane Supply Co., Brevard, N. C., wants brick machinery. (See "Tile Machinery.")

Bridge work.—Bids will be received until April 21 at the office of F. M. Guthrie, secretary, Memphis, Tenn., for permanent repairs of steel bridge across Hatchie river. Plans and specifications on file at office of F. M. Guthrie. A forfeit of \$500 must accompany each bid. Usual rights reserved; C. A. Sedinger, bridge superintendent. (Bids were previously asked to be opened March 24.)

Builders' Supplies.—Live Oak Brick & Supply Co., Live Oak, Fla., wants addresses of manufacturers of lime, cement and all builders' supplies.

Building Materials.—Southern Land & Improvement Co., C. S. Woods, president, Macon, Ga., wants sash, doors, roofing.

Building Materials.—Bowen & Thomas, Brunswick, Ga., wants prices in carload lots on sash, doors, blinds, sash weights, nails, hardware and other material used in house construction.

Building Materials.—Henry Witz, care Joyner, Witz & Co., 36 Hopkins Place, Baltimore, Md., wants prices on iron work, glazing, sheet metal, etc.

Building Materials.—Arthur B. Jarvis, Henderson, Ky., wants joist hangers, anchors, metal sash, wireglass and factory sash.

Building Supplies.—Cleveland Concrete Construction Co., Cleveland, Tenn., wants materials for the interior work of buildings.

Cans.—M. J. Myer, chairman street and

alley committee, Selma, Ala., wants prices on stationary street-garbage cans.

Celling.—Lanham & Sons, Rome, Ga., want bids on ceiling.

Cement.—Southern Land & Improvement Co., C. S. Woods, president, Macon, Ga., wants Portland cement.

Cement-block Machinery.—Southern Land & Improvement Co., C. S. Woods, president, Macon, Ga., wants cement-block machinery.

Cement Machinery.—W. L. Waller, Meridian, Miss., wants addresses of manufacturers of machinery for making Portland cement.

Clock and Watch Manufacturers.—Columbus Coca-Cola Bottling Co., Columbus, Ga., wants addresses of manufacturers of watches and clocks; want to use same as an advertising medium.

Concrete-block Machinery.—Lorenzo Davis, 723 Washington avenue, Montgomery, Ala., wants machinery for making concrete brick, block and tile.

Concrete-plant Supplies.—Greenfield Concrete Co., Greenfield, Tenn., wants Portland cement, screened gravel, crushed rock.

Cotton-mill Machinery.—Greensboro Supply Co., Greensboro, N. C., wants full particulars of and prices on all kinds of good second-hand cotton-mill machinery and supplies.

Cutlery.—Huntsville Bagging & Tie Co., I. Wind, secretary-treasurer, Huntsville, Ala., wants addresses of manufacturers of knives or blades to cut cloth in different shapes in large quantities, such as are used by trouser and pad makers.

Concrete-block Machinery.—Valdosta Stone & Brick Co., Valdosta, Ga., wants concrete-block machinery.

Concrete Masonry, etc.—Bids will be received until April 25 at the office of the Roberts & Abbott Company, engineers, 706 Maryland Trust Building, Baltimore, Md., for approximately 12,000 cubic yards concrete masonry, 750,000 feet B. M. of timber bridging and 21,000 lineal feet of piling on the line of the Washington, Baltimore & Annapolis Electric Railway. Plans and specifications on file at the office of the engineers, 706 Maryland Trust Building, Baltimore, Md., and Schofield Building, Cleveland, Ohio. Copies can be obtained at either office, but preferably call at the Baltimore (Md.) office. Copies will not be forwarded.

Concrete Mixer.—Bowen & Thomas, Brunswick, Ga., wants concrete mixer with capacity of 300 to 400 cubic yards of concrete per day, with boiler and engine.

Electric Wiring.—See Building Note under Pine Bluff, Ark.

Electrical Equipment.—Henry Witz, care Joyner, Witz & Co., 36 Hopkins Place, Baltimore, Md., wants electrical equipment.

Electrical Equipment.—F. E. Bailey & Co., Atlanta, Ga., want a 75, 100, 125 or 150-kilowatt revolving field generator, three phase, 60 cycles, about 2200 or 2300 volts (may be able to use a 1000-volt machine), with or without switchboard and exciter, of latest design. Do not want inductor type. Give all detailed information in first letter, send cut of machine, name best cash price, if delivery can be made at once and where can be seen; second-hand in good condition. Also want a lot of good second-hand No. 6, No. 8, No. 10 and No. 12 insulated wire for use on same contract.

Electrical Equipment.—Magnet Knitting Mills, Paul F. Vogel, manager, Clinton, Tenn., wants electrical equipment for lighting purposes.

Electrical Equipment.—Sulphur Planing Mill & Lumber Co., M. T. Barrier, proprietor, Sulphur, I. T., wants one 30-horse-power motor, alternating current; second-hand.

Electrical Equipment.—Sayre Mill & Elevator Co., Sayre, O. T., wants generator, direct connected, 55 to 65 kilowatts, 220 to 250 volts, about 950 R. P. M.

Electrical Equipment.—Town of Mooreaville, N. C., A. I. Starr, mayor, will shortly be in the market for equipment for electric-light plant.

Electrical Equipment.—Fuller Combing Gin Co., James T. Fuller, president, Charlotte, N. C., wants electrical equipment for transmitting power in cotton-gin works.

Electric-light Plant.—Elkton Milling Co., Elkton, Va., wants electric-light plant for lighting small town.

Electric-light Plant.—N. S. Sherman Machinery Co., Oklahoma City, O. T., wants complete equipment for electric-light plant.

Elevator.—Magnet Knitting Mills, Paul F. Vogel, manager, Clinton, Tenn., wants elevator.

Elevator.—Lanham & Sons, Rome, Ga., want estimates on electric elevators.

Elevator.—Hightower & Powe, Hattiesburg, Miss., want hand-power elevator.



Engine.—New Albany Compress Co., New Albany, Ind., wants a 12x30 Corliss engine.

Engine.—Lafayette Cotton Oil Mills, L. L. Torbert, general manager, Lafayette, Ala., wants a 50 to 60-horse-power balanced-valve engine; second-hand in good condition.

Engine.—A. M. & J. C. Dupont, Ltd., Houma, La., wants a 40-horse-power stationary gasoline double-cylinder engine with driving pulley between the two flywheels; to be used for a stern-wheel freight boat. Want to use but one belt. Also want to secure agency for same.

Engine and Boiler.—Arthur B. Jarvis, Henderson, Ky., wants engine and boiler.

Engine and Boiler.—Geo. A. Folmar, secretary-treasurer Excelsior Land & Improvement Co., Montgomery, Ala., wants a 65-horse-power engine and 100-horse-power boiler.

Engines and Boilers.—Magnet Knitting Mills, Paul F. Vogel, manager, Clinton, Tenn., wants 60-horse-power engine, 100-horse-power boiler and all other power and transmission appliances.

Fire Hose.—Geo. W. Summers, secretary town of Abbeville, La., will receive bids until April 15 for furnishing 1200 to 1500 feet of 2½-inch rubber-lined fire hose for the town; Jos. R. Leguene, mayor.

Flooring Machinery.—C. M. Harris, Dawson, Ga., wants a second-hand flooring machine. Quote price f. o. b. Dawson.

Flour-mill Machinery.—Willow Grove Milling Co., Luray, Va., wants a three-section scaper.

Foundry Equipment.—Fuller Combing Gln Co., James T. Fuller, president, Charlotte, N. C., wants foundry equipment.

Fruit Presses.—H. Goldschmidt & Co., P. O. Box 785, San Antonio, Texas, wants addresses of manufacturers of fruit presses.

Furniture.—Chatsworth Land Co., Dalton, Ga., wants bids on furnishings for hotel.

Ginnery.—Major Union Gln Association, Grimes, O. T., wants complete equipment for four-stand gln.

Ginnery Equipment.—Easley Oil Mill Co., J. A. Robinson, secretary, Easley, S. C., wants equipment for three or probably six cotton gins.

Glass-works Supplies.—Grafton Window Glass Co., Grafton, W. Va., wants to correspond with glass-work supply houses for a 36-blower tank plant.

Grinding and Polishing Machinery.—J. L. Roark Estate, Greenville, Ky., wants hand or foot power machine, fitted for cutting, polishing, grinding, buffing, etc., and supplies and materials for doing the work. Makers are requested to submit catalogues and trade prices at once.

Heating Apparatus.—Greenbrier Jewelry Co., Marlinton, W. Va., wants information and bids on hot-water and steam-heating apparatus.

Heating Apparatus.—Lanham & Sons, Rome, Ga., want estimates on steam-heating apparatus for three-story building.

Heating Apparatus.—See Building Note under Pine Bluff, Ark.

Heating Apparatus.—Henry Witz, care Joyner, Witz & Co., 36 Hopkins Place, Baltimore, Md., wants prices on steam-heating apparatus.

Heating Apparatus.—Bruno Bukofzer, proprietor Terminal Hotel, Atlanta, Ga., wants estimates on hot-water and steam-heating apparatus for five-story hotel.

Heating Apparatus.—Rev. I. F. Belts, pastor M. E. Church, South, Bryan, Texas, wants prices on hot-water and steam-heating plants.

Heating Apparatus.—W. V. Freley, secretary building committee, Burrill College, Spencer, Tenn., wants prices on furnaces.

Hydraulic Rams.—James R. Werth, Room 46, Chamber of Commerce Building, Richmond, Va., wants catalogues of hydraulic rams.

Ice Machinery.—Max Schmidberger, Farmville, Va., wants a second-hand 10 to 20-ton ice plant with or without power.

Ice Machinery.—E. Mitchell, Scranton, Miss., wants prices on 15-ton ice machine.

Ice Machinery.—W. H. Marshall, Elkton, Va., wants new or second-hand ice machinery.

Ice Machinery.—Box 151, Greenville, N. C., wants ice machinery.

Insulator-pin Machinery.—W. T. Rose, Wadesboro, N. C., wants addresses of manufacturers of machinery for making insulator pins for crossarms.

Iron-working Machinery.—Fuller Combing Gln Co., James T. Fuller, president, Charlotte, N. C., wants iron-working machinery.

Iron-working Tools.—Houchin-Smith & Son, Inc., P. O. Box 62, Goldsboro, Md., want sec-

ond-hand sheet-iron-working tools suitable for No. 20 iron rolls, 2½x36 inches; large burling machine; swedge 10-inch gap and beader.

Lath Mill.—Clayton Manufacturing Co., Princeton, N. C., wants complete outfit for lath mill, three or four-saw gang with bolter and trimmer.

Lumber.—Rhode Island Company, Spray, N. C., wants prices f. o. b. Spray on No. 2 pine shingles in large quantities.

Machine Tools.—The Southern Railroad, J. P. Minetree, purchasing agent, Washington, D. C., has issued a list of machine tools, upon which the trade is now bidding, intended for the Southern shops. A portion probably will go to Spencer, N. C.

Machine Tools.—Ornamental Wire & Iron Co., 2913-2915 Broadway, St. Louis, Mo., wants a combined punch and shear.

Machine Tools.—Reams & Co., 622 Main street, Lynchburg, Va., want addresses of manufacturers of lathe machines.

Machine Tools.—Cliff Williams Machine Co., Meridian, Miss., wants pipe-cutting and threading machinery, punch and shears.

Mechanical Equipment.—Manufacturers' Agency, J. S. Cummings, manager, Elkins, W. Va., wants catalogues and trade prices on mechanical equipment, machinery and supplies.

Metal-working Machinery.—Southern Structural Steel Co., San Antonio, Texas, wants addresses of manufacturers of angle benders.

Metal-working Machinery.—J. H. Macleary, Suffolk, Va., wants one power circular cut-off saw for metal. Quote price f. o. b. Suffolk; also state condition.

Mill Supplies.—Arthur B. Jarvis, Henderson, Ky., wants mill supplies.

Naphthalene.—Percival Wood Preserving Co., M. C. Percival, vice-president, Commercial National Bank Building, Houston, Texas, wants crude naphthalene; will use from 50 to 200 tons monthly.

Naval Supplies.—Bids will be received until April 10 at the bureau of supplies and accounts, Navy Department, Washington, D. C., for furnishing at the navy-yard a quantity of naval supplies as follows: Window glass, files, hydraulic jacks, hardware, pine, sheet copper, aluminum, miscellaneous metals, solder, bar iron, roof trusses, pipe and fittings, steam traps, etc. Application for proposals should refer to Schedule 433. Blank proposals will be furnished; H. T. B. Harris, paymaster-general, U. S. N.

Novelty Works.—Geo. A. Folmar, secretary-treasurer Excelsior Land & Improvement Co., Montgomery, Ala., wants complete equipment for novelty works.

Paint Manufacturers.—Key West Electric Co., O. C. G. Urban, general manager, Key West, Fla., wants addresses of paint manufacturers.

Paper Manufacturers.—W. C. Satterfield, Cartersville, Ga., wants addresses of paper manufacturers.

Paving.—Sealed proposals, addressed to the Board of Awards, City Hall, Baltimore, Md., will be received until April 4 at the office of Harry F. Hooper, city register, City Hall, to grade, gutter and pave with macadam Erdman avenue for 1500 feet. Specifications may be obtained from Eugene F. Rodgers, secretary commissioners for opening streets, City Hall.

Paving.—Bids will be received until March 28 at the office of W. E. Cuthaw, city engineer, Richmond, Va., for paving as per specifications and schedules on file. Proposals are also asked for asphalt blocks and vitrified bricks as per specifications and samples to be delivered on wharf or at depot in Richmond. Bids will also be received for laying asphalt blocks or vitrified brick paving, the city furnishing the blocks or bricks on wharf or at depot, Richmond. Full detailed information on application. Certified check for \$250 must accompany each bid. Usual rights reserved.

Piping.—Magnet Knitting Mills, Paul F. Vogel, manager, Clinton, Tenn., wants steam and water pipes.

Piping.—New State Gas & Oil Co., Hobart, O. T., will want bids in 30 or 60 days on pipe line for distributing gas and petroleum.

Plumbing.—See Building Note under Pine Bluff, Ark.

Power Plant.—N. S. Sherman Machinery Co., Oklahoma City, O. T., wants equipment for steam-power plant.

Railway Equipment.—American Standard Cement, Lime & Stone Co., Martinsburg, W. Va., wants 6000 cull ties and from 275 to 300 tons of 85-pound relaying rails.

Railway Equipment.—Davis & Turner Falls Railroad Co. wants 40-pound new steel rails or 56 to 60-pound relay steel to lay six miles of track; two light engines, weighing from 15 to 30 tons each; also six open cars in good

condition. Address J. B. Dickinson, secretary, Davis, I. T.

Roofing.—See "Building Materials."

Saw-mill.—Geo. A. Folmar, secretary-treasurer Excelsior Land & Improvement Co., Montgomery, Ala., wants a small saw-mill outfit.

Saw-mill.—L. H. Cannon, Newbern, N. C., wants a portable mill.

Sewerage System.—Sewer Commission, Milledgeville, Ga., will receive bids until May 2 at the office of city clerk for building three and one-half to four and one-half miles of sanitary sewers as per profiles and plans. Certified check for 10 per cent. of amount of bid must accompany each bid. Specifications on file at city clerk's office. Usual rights reserved; Julius A. Horne, clerk.

Smoke Consumers.—Laird Company, 441 West Main street, Louisville, Ky., wants price and catalogues of smoke consumers.

Stack Lining.—Arthur B. Jarvis, Henderson, Ky., wants stack lining.

Steam Hammer.—J. H. Macleary, Suffolk, Va., wants one small steam hammer; second-hand in good condition preferred. Quote price f. o. b. Suffolk; also state condition.

Steam Shovel.—Wanted, small steam shovel, capacity of dipper not over one and one-half yards; good condition is not necessary. Address, with full particulars, date, specifications, etc., the C. B. Ford Company, Richmond, Va.

Street Improvements.—Street Committee, Lynchburg, Va., will receive bids until April 9 at the office of H. L. Shaner, city engineer, for certain concrete granolithic, concrete and other work. Approximate estimate of quantities of work to be done is as follows: 1200 cubic yards of excavation, 2150 square yards granolithic sidewalk, 750 square yards brick sidewalk, 2880 lineal feet of concrete curb. Full information can be secured, plans seen, specifications, forms of proposals and contracts obtained at city engineer's office. Usual rights reserved.

Tank.—Magnet Knitting Mills, Paul F. Vogel, manager, Clinton, Tenn., wants water tank.

Tile Machinery.—Miller-De Vane Supply Co., Brevard, N. C., wants tile machinery. (See "Brick Machinery.")

Tool Manufacturers.—Fred Bryan, Malmes-

burg, Pa., has invented a chain-cutting angular augur which he wants to have manufactured on royalty or otherwise. This device may be built as a heavy-power machine or for hand use.

Vaults.—See "Bank Fixtures."

Water-works.—N. S. Sherman Machinery Co., Oklahoma City, O. T., wants complete equipment for water-works.

Water-works Equipment.—Randolph Lawrence, Roff, I. T., will receive bids until April 24 for all material needed in constructing water-works for town. Boilers, pumps, boiler-feed pumps, heater, hydrants, valves, cast-iron water pipe, standpipe or water tower, lead, onkum, steam pipe and fittings will be required. Specifications and requirements, fully stated, can be had by addressing the O'Neil Engineering Co., Dallas, Texas. Bids will be received for material only. Usual rights reserved.

Woodworking Machinery.—Sulphur Planing Mill & Lumber Co., M. T. Barrier, proprietor, Sulphur, I. T., wants one 24-inch single surfacer, one hand saw, one jointer; second-hand in good condition.

Woodworking Machinery.—See "Novelty Works."

Woodworking Machinery.—See "Insulator-pin Machinery."

Woodworking Machinery.—See "Flooring Machinery."

Woodworking Machinery.—Columbia Manufacturing Co., Lock Box No. 1, Columbia, N. C., wants a light double surfacer with tongue, groove and beading attachment; want as light as possible, but with sufficient strength to surface up to 18 inches, and tongue, groove, bead and mold from three-eighths inch to two and one-half inches thick.

Woodworking Machinery.—Fuller Combing Gln Co., James T. Fuller, president, Charlotte, N. C., wants woodworking machinery.

## MEXICO.

### Railways.

Steam Railroad.—The National Lines of Mexico have applied for a concession to build an extension of the belt line which will connect with a number of factories and railroads at the City of Mexico. R. G. McDonald is chief engineer in that city.

## INDUSTRIAL NOTES FROM HAVANA.

[Special Correspondence Manufacturers' Record.]

Havana, Cuba, March 20.

An investigation of the industrial activity prevailing in this city and throughout the island of Cuba indicates that a good beginning has been made in planning to take every advantage of the industrial resources in existence here. Havana itself is to a considerable extent, especially in the more modern sections, kindred in appearance to an American city and imbued with the American idea of progress. In my examinations as to "what is doing" in the introduction of modern methods and the latest-improved mechanical appliances I found most of the leading manufacturers of the United States well represented by energetic men. Some reference to these firms and their representatives is of interest.

The Knight & Wall Company of Havana and Tampa, Fla., is one of the best-known enterprises here. Its Havana branch is managed by a man who has had long experience in Spanish-American countries. Its Havana agency, like the Tampa headquarters, carries a heavy line of general hardware, mill supplies, oils, agricultural implements, sanitary and plumbing outfits, these latter being also installed, and various other mechanical specialties in demand. Besides these manufactures, the Knight & Wall Company represents Messrs. Jenkins Bros. of New York, Lunkenheimer Company of Cincinnati, Michigan Stove Co. of Detroit, Chicago Belting Co. of Chicago, Flint & Walling Manufacturing Co. of Kendallville, Ind.; Johns-Manville Company of New York, Dodge Manufacturing Co. of Mishawaka, Ind.; John Deere Plow Co. of Indianapolis, Messrs. Deere & Co. of Moline, Ill., and Deere & Mansur Company of Moline, Ill.

The Stirling Consolidated Boiler Co. of New York maintains its branch office at Obispo 33, and is ably represented by Wm. G. Grimm, who reports an unprecedented demand in his special line. This Cuban office of the Stirling Company was established tentatively about 16 months ago and has proven successful beyond expectation. Mr. Grimm has recently sold a battery of five boilers, 2500 horse-power, to the Cuba Sugar Refining Co. of Cardenas, a similar order for Nueva Luisa and one for Santo Domingo. Two new sugar factories which are to be erected have ordered boilers from Mr. Grimm.

In speaking of Cuba's progress Mr. Grimm says: "The production of every variety of vegetation is increasing, and yet does not keep pace with the demand, while values in land are advancing, and Cuba is experiencing an era of prosperity similar to developing sections in the United States. There is not a trace of yellow fever on the island, and the present excellent sanitary system precludes the possibility of its recurrence." Mr. Grimm also says that the shipping facilities from New York are all that could be desired.

A number of important American enterprises are represented here by P. D. de Pool, Obispo 7. Mr. de Pool was for a number of years in the United States, where he acquired a knowledge of American business methods, and as a manufacturers' agent introducing American goods in Cuba he has met with success. While he represents a number of manufacturers at present, he is in a position to make further connections. The companies Mr. de Pool now represents include the Burt Manufacturing Co. of Akron, Ohio; the Hydro-Carbon Furnace Co. of St. Louis, Mo., and the Waverly Boiler Co. In introducing the St. Louis company's system Mr. de Pool is personally interesting and educating prospective Cuban users.

Among the prominent mechanical engineers is Manuel J. Gonzalez, 37 Cuba street, who takes charge of work for the Department of Public Works and other departments of the republic. Mr. Gonzalez was employed by the department named for 26 years and was subsecretary during the last six years. He prepares plans and specifications for railroads, wharves, dry-docks, baths, aqueducts and other large undertakings in the construction field, and in addition to these is subsidized agent of a number of prominent companies, including the Cuban Central Railway, the Western Railway of Havana, the Gas & Electric Light Co. of Havana, and various others of equal prominence. During the period of his activities throughout Cuba Mr. Gonzalez has acquired a large fund of data enabling him to be in a position to give service to capitalists and manufacturers who think of investing in Cuba's resources.

The General Electric Co. of Schenectady, N. Y., and the Otis Elevator Co. of New York are represented by Ernest Zaldo, who has recently closed a number of important

contracts and says that his sales this year will far exceed those of any previous year. Mr. Zaldo just closed a sale of two Otis passenger elevators of the latest type to the new National Bank of Cuba, of which E. G. Vaughan is president. Another sale of this latest type of Otis elevator is to the American Tobacco Co. at Havana. There is a growing demand for electrical machinery all over the island, and electrical equipments manufactured by the General Electric Co. are called for. During the past several weeks Mr. Zaldo sold four distinct General Electric installations.

Havana's mechanical engineers include W. J. Sissons, with offices at 76-78 Quarto 44, Cuba street, who has had many years' experience in the varying phases of his profession. Upon deciding that Cuba presented a promising field for his services Mr. Sissons immediately established his Havana office, and with him is associated J. F. Adams, who has the reputation of being an energetic business man. It was because of practical experience of some years in designing, drafting and mechanical engineering of a diversified nature in Spanish-American countries that Mr. Sissons selected Cuba at this particular period in its development as the scene of his future activities.

Mr. M. N. Glynn, Mercaderes No. 2, represents some of the most important American manufacturers. He was born in Cuba, is familiar with the Spanish language and has been very successful in introducing the products of his principals, his sales for 1905 approximating \$630,000. The enterprises represented by Mr. Glynn include Collins & Co., manufacturers of axes, tools, plows, etc., 212 Water street, New York; E. C. Atkins & Co., saw manufacturers, Indianapolis, Ind.; J. A. & W. Bird & Co., manufacturers of Rex Flintkote roofing, Boston, Mass.; Messrs. J. Stevens & Co., Messrs. Leggett & Bro. and others.

Financial interests here have ample accommodations. In this connection it is interesting that Hugh Kelly & Co. of 79 Wall street, New York, have established a branch office at Obrapia 36. It is the purpose of this branch house to represent foreign enterprises, the prospective business covering a general line, whether in lands, machinery or investments. Messrs. Hugh Kelly & Co. are of high standing in New York financial circles, throughout the United States and in other parts of the world, and the introduction of their branch office here will doubtless be of benefit in helping to advance Cuba's interests.

The Royal Bank of Canada, head offices in Halifax, N. S., and chief executive offices in Montreal, Quebec, maintains an extensive branch here in Havana. This institution is well known in the financial world, and its services are being largely called upon by the active business men of this city and the entire island. With total assets of over \$36,000,000 and its affiliations throughout North and South America, Europe and its home country (Canada), the Royal Bank of Canada, with its complete organization, is in a position to give the best financial service to those applying for its accommodations. Messrs. F. J. Sherman and R. W. Forrester are the bank's Havana agents. Mr. Sherman is also supervisor of the branches in Cuba.

The Interstate Electric Co. of New Orleans is at work on a novel and important contract for electrical machinery in Cuba. It is building power plant and furnishing rolling stock for the first sugar-cane trolley system in the

island, the proprietors of which own the great sugar plantation at Santa Filomena, Corral Falso. The material to be furnished consists of an electrical outfit for hauling the sugar-cane to mill. There will be three branches radiating from the mill—one three miles, the second three and one-half miles and the third seven miles in extent. One of the branches will be used for passenger service. The rolling stock will include 20 cane freight cars, two small locomotives and one large locomotive, capacity 400 kilowatts in all. Harrisburg engines, motor gear, will be set for lighting purposes in connection with railway electric travelling cranes, Niles. The cranes will be used for unloading. A number of novel innovations, such as extra safety devices, are introduced in this equipment, due to the presence of inferior help. The entire installation will cost \$65,000.

Mr. Ferdinand Mesa, 23 Cuba street, has lands to offer in every province in Cuba. In addition to this he owns and controls valuable parcels of real estate, improved and unimproved, in Havana and suburbs. Mr. Mesa sold the site on which the new \$1,500,000 hotel will be constructed in Havana, the capital for which has already been subscribed by a New York syndicate. Those who are interested in Cuban real estate can write Mr. Mesa for his artistic map, which will give a conception of the properties he offers.

Mr. T. L. Huelsenkamp, 127 Obispo, sells tracts of farming lands adapted for sugar-cane, fruit and vegetables. He has sold a heavy acreage of virgin land to American homeseekers during the past winter. As soon as the Florida East Coast Railway extension is completed there will doubtless be an increased demand for Cuban farm lands.

Another branch financial institution here is the Bank of Nova Scotia, main offices at Halifax, where H. C. McLeod is general manager. This bank has numerous branches throughout its own country, several in the United States and several in the West Indies, including the Havana branch, of which J. A. McLeod is manager. It has a capital of \$2,500,000, a reserve fund of \$4,200,000, and is therefore in a position to cater to the needs of manufacturers, capitalists and others requiring the services of a modern banking institution provided with ample funds and a progressive management.

There is much interest being shown in the development of Cuban lands and there are numerous organizations promoting these developments. The Cuba Real Estate Association has its main offices at 127 Obispo street. Mr. J. J. Warren is president; R. B. Armour, secretary, and C. J. Huelsenkamp, general manager. This association has acquired thousands of acres suitable for cultivation, and it is offering its properties on easy terms to homeseekers, to manufacturers, to investors and to others who are interested in the future possibilities of this island.

Mr. Edward A. Kummel has offices in the Bank of Nova Scotia Building, corner of Cuba and O'Reilly streets. He is an extensive operator in Cuban properties and makes a specialty of plantations, real-estate investments and commissions. Mr. Kummel has been an active worker in all that pertains to developing Cuba's numerous resources in all avenues of activity, and is interested in orange groves, stock ranches, timber tracts and sugar mills, besides having a general knowledge of Cuban affairs. He is prepared to correspond with anyone seeking general or specified information regarding the island.

JOHN BANNON.

Focht Sons, Hoboken, N. J., recently installed two "Allen" boiler riveters, the former a 73-inch reach and the latter a 96-inch reach.

#### Manufacturers' Agents Seeking Equipments.

Information has been received that the Manufacturers' Agency of Elkins, W. Va., invites manufacturers to send complete catalogues and details of commission allowances. The agency mentioned is having considerable inquiry for machinery and mechanical supplies of all kinds, and is prepared to make arrangements for representing manufacturers. Address J. S. Cummings, manager.

#### The Asphalt Ready Roofing Co.

Dealers in and users of the products of the Asphalt Ready Roofing Co. are advised that the company's plant, which was destroyed by fire in January, is now ready to make shipments. The company states that its entire works have been rebuilt and equipped with new machinery, and that all its brands of roofing can be obtained promptly in any quantities by consumers. The Asphalt Ready Roofing Co.'s main offices are at 136 Water street, New York.

#### Inducements to Business Enterprise.

Inducements to business enterprise are being offered by capitalists who are promoting the interests of Silver Creek, Miss., a new town on the Mississippi Central Railroad. It is stated that liberal propositions are being offered to merchants and free sites to manufacturers. Plenty of hardwood and yellow pine grows in the surrounding country, and woodworking plants especially could be established to advantage. Mr. Thomas M. Ferguson of Hattiesburg, Miss., can give information.

#### Investigate Hendersonville, N. C.

People who may be looking southward for investments, for establishing homes or engaging in manufacturing should not fail to investigate the advantages of Hendersonville, N. C. The city named is rapidly growing, and offers inducements to capital seeking profitable investment. It is in the center of the resort section of the "Land of the Sky," and its Board of Trade is working vigorously to make known its numerous resources. Write the organization for full particulars regarding Hendersonville and its surrounding territory.

#### The Bidwell Electric Co.

An addition to the manufacturing plants producing electric motors and generators is seen in the organization of the Bidwell Electric Co., which was incorporated last month in Oklahoma Territory. The company has its main offices and factory in Chicago, the executive offices being in the Monadnock Building. It has the following officers: President, Benson Bidwell; vice-president, Wilmer S. Snow, and secretary-treasurer, G. W. Johnston. Bidwell cold motors and generators will be the specialty of this company, and buyers of equipment of this character will find it advantageous to correspond relative to the efficiencies and prices of these machines. The enterprise is capitalized at \$2,000,000.

#### Chesapeake Iron Works.

The Chesapeake Iron Works, Bush street and Baltimore & Ohio Railroad, Baltimore, manufacturer of structural and ornamental iron work, reports business as quite brisk and most encouraging. The company has secured several large contracts in this city and the South and is in a position to fill orders immediately for prompt delivery, as it has on hand 1000 tons of beams, channels, angle bars and plates. Chesapeake representatives are located in North Carolina, Virginia and West Virginia, and the company wants to engage agents in other Southern States. There need be no apprehension that orders, large and small, will not be handled with dispatch, as the company has facilities for meeting all demands.

#### Successful Humidifying Device.

The humidifying device of the Regenerated Cold Air Co., Boston, Mass., is meeting with success. The company has recently perfected a new machine for taking care of large mills. Its new humidifier has a capacity for treating from 250,000 to 350,000 cubic feet of space. Among the more notable orders which have been placed with the company recently is one from the new Arlington Mills, Lawrence, Mass., for an equipment for eight rooms, and one from the Whitman Mills, New Bedford, Mass. At the latter mill there are already installed in the room to be treated 90 heads of another moistening device. This new and large unit is claimed to be not only less expensive to install than any other system, but that the horse-power required for operation is very much less.

#### Electrical News from Georgia.

Some interesting news comes from Georgia. It includes reference to the North Georgia Electric Co. of Gainesville, Ga., having placed contract with the John A. Roebling's Sons Company of Trenton, N. J., through the Atlanta branch, for copper wire and underground lead-covered cables to meet present requirements in the city of Atlanta. By July 1 about 10,000 horse-power will be delivered over the lines from Gainesville to Atlanta and its vicinity—50 miles. Current will be transmitted by the overhead lines to city limits, and thence through underground cables to the several substations located in Atlanta, at 11,000 volts A. C. From the substations the distribution will be through underground cables at 2300 to 250 volts D. C. The overhead lines from Gainesville to Atlanta will consist of three 1-0 B. & S. H. D. copper conductors, stranded seven wires in each. The copper will be drawn to special gauge and will possess especially high tensile strength. The total length of the three cables will be approximately 150 miles. The cables will be strung on porcelain insulators mounted on steel towers substantially built upon solid concrete foundations. The underground lines within the city limits are to be installed in the conduits of the Atlanta Telegraph & Telephone Co. These lines will require about seven miles of three-conductor 3-0 B. & S. copper cables, standard paper insulation, with one-eighth-inch lead covering, to be operated at 11,000 volts A. C. There will also be some six miles of two-conductor paper and leaded cable, ranging in size from 300,000 C. M. to 1-0 B. & S., for 2300 volt A.-C. service; also a considerable quantity of rubber-insulated and leaded cables in size from 300,000 C. M. to No. 6 B. & S., for the distribution on network system. This initial layout of the cable system is but the beginning of the company's operations in the Atlanta district. It is expected that an ultimate capacity of at least 100,000 horse-power will be developed at the Gainesville plant, and that this amount can be exceeded when certain plans now in preparation have been completed.

#### Increasing Its Facilities

In order to provide for an enlargement of its factory and equipment, the Standard Roller Bearing Co., 48th street and Girard avenue, Philadelphia, Pa., has increased its capital stock from \$2,000,000 to \$3,500,000, and will begin immediately the erection of a four-story plant 150x200 feet to manufacture annular ball bearings on which the company holds basic patents. During the past year the company equipped with machinery a four-story building 95x200 feet, iron foundry 70x150 feet, hardening and tempering building 70x150 feet and crucible-steel castings plant 60x100 feet. With the erection of its new building more than 1000 hands will be employed by the Standard Roller Bearing Co. in the manufacture of steel balls, ball bearings, roller bearings, automobile axles and annular ball bearings.

#### Consolidated Engine-Stop Co.

The Consolidated Engine-Stop Co. announces that its steadily-increasing sales of the Monarch engine-stop and speed-limit system have forced its removal from 100 Broadway to new quarters at 132 East 12th street, New York, where, the office and factory being under one roof, the business may be handled much more expeditiously and somewhat more economically. This company has taken advantage of the opportunity offered by a larger floor space to install new machinery which will not only very materially increase its capacity, but maintain, and, if possible, improve the high quality which has been so important a factor in the success of the Monarch system. Its new location is convenient to subway and elevated railway stations, and is easily accessible from points farther east and west by several crosstown surface lines.

#### A Large Roofing Order.

In rebuilding the factories of the Ohio Brass Co., Mansfield, Ohio, which were partially destroyed by fire last year, the order for roofing was placed with the H. W. Johns-Manville Company through its Cleveland branch. The roofing to be used is the well-known "J-M Asbestos Roofing," which is coming into very general use for large manufacturing establishments, railroad depots and all large buildings. The H. W. Johns-Manville Company is to be complimented on securing this order for the reason that the plant of the Ohio Brass Co. is one of the most prominent in Ohio and its equipment throughout is of the most modern character. The size of the order, which amounted to 850 squares, resulted in competition with roofing manufacturers throughout the country. The order was placed after investigation of the various prepared roofings now on the market.

## INDUSTRIAL NEWS OF INTEREST

#### Cotton Lands, Mines, etc.

Attention is directed to the announcement for sale of 900 acres of cotton land, containing saw-mill and copper and gold mines equipped with steam-power machinery. Particulars may be obtained from Carl Henrich, Metairie, La.

#### Davis Coal & Coke Co.

The Davis Coal & Coke Co., No. 1 Broadway, New York, announces under date of March 19 that, "effective this date, A. Mishler has been appointed manager of the New York sales office of the company, vice D. W. Bowden, resigned; A. J. Porter, general manager of sales. Approved: T. B. Davis, Jr., vice-president."

#### Mr. W. K. Palmer Engaged.

The city of Holton, Kan., has engaged W. K. Palmer, consulting engineer, 718 Dwight Building, Kansas City, Mo., as engineer for the preparation of plans and specifications and the superintendence of construction of municipal improvements to be undertaken by Holton. There will be constructed water-works and sewerage systems and an electric-lighting plant, to cost about \$33,000.

#### Some Shay Locomotive Sales.

Contracts have been received during the week by the Lima (Ohio) Locomotive & Machine Co. for two Shay locomotives. The Kaul & Hall Lumber Co. of Pennsylvania sends one order calling for a 65-ton Shay locomotive, and George Cousin of Louisiana sends the other order calling for a 20-ton Shay locomotive.

#### Wellman-Seaver-Morgan.

At the recent annual meeting of the Wellman-Seaver-Morgan Company of Cleveland, Ohio, the office of general manager, which has been vacant since the death last June of Charles H. Wellman, was filled by the election of S. H. Pitkin, whose present title will be first vice-president and general manager. Otherwise no changes were made in the officers of the company.

#### "Allen" Boiler Riveter Sales.

It is announced that John F. Allen, 370-372 Gerard avenue, New York, the pioneer manufacturer of portable pneumatic riveting machines, reports a steady demand for the well-known "Allen" riveters. Mr. Chris Cunningham, Greenpoint, Brooklyn, N. Y., and Geo.



### Something About Factory Cost Systems.

Manufacturers generally appreciate the importance of following a factory-cost system in their operations. Modern competition has made it necessary that manufacturers give every possible attention to the details tending to economize as well as perfect their products, and progressive men are not averse to acquiring additional knowledge along these lines. The following statement will therefore be of interest: "The manufacturers who are operating factory-cost systems of their own devising often violate some of the laws of accounting. The laws in reference to the relation of debit and credit are generally understood, but those covering the basis of distribution of expense are somewhat modern in their application and their existence infrequently known. One of the greatest errors now common in cost systems is the disposition of the expense incurred by carrying a stock of finished goods. To include in the manufacturing expense of a factory the insurance, interest, rent, light, heat and wages occasioned by the finished-stock room is to consider that the current cost of production is increased on account of failure to sell the goods previously made. Finished stock is carried for the convenience of sales department in making prompt shipment and in consideration of their anticipation of trade demands. If no sales department were maintained and goods were shipped upon completion, this expense would be eliminated. If goods were purchased instead of manufactured, the expense would exist. This expense, which is the result of operating a sales department, must be considered a part of the expense of operating that department, and must not be included in the cost of production, to which it has no relation. This stockroom expense does not include shipping expense, which is, in most cases, now considered correctly as an operating expense. The manufacturer who can purchase some of his finished parts in the open market compares his cost of production with market price. The concerns making these parts for him include no stockroom expense in their price, as concerns manufacturing for the trade carry practically no finished stock. To the manufacturers who carry a large stock of finished goods and include the expense in cost of production it often appears cheaper to buy finished parts when the contrary is true." The foregoing is by Harold A. Wright, business systematizer, 141 Broadway, New York.

### Seeking Boiler Works Location.

A letter received by the Manufacturers' Record contains statements that will interest organizations engaged in promoting the industrial advancement of their respective cities. It comes from an Ohio man, who says that he wants to locate in a progressive Southern business community where the climate is attractive, and plans to build and repair boilers. The writer prefers to join some established foundry and machine shop or locate wherever there is a good opportunity for a boiler plant, Alabama or Tennessee being preferred. This correspondent was for 10 years with one leading locomotive works, and has also been connected with other prominent locomotive plants, and is prepared to give good references. He has some capital, and can make personal investigations about April 10. Organizations wishing to correspond can address "Boiler Builder," care of Manufacturers' Record, and their letters will be forwarded.

### An Automatic Telephone System.

With people who constantly require an efficient telephone service a device that will in any way tend to do away with delays and petty annoyances will always command attention. The service of an automatic telephone system which does not require an operator and which, consequently, gives no wrong connections or subjects the user to such delays or other inconveniences which seem sometimes inevitable even when served by the most careful and attentive operators, will doubtless be fully appreciated by business men and others when they recognize the merits of the service it renders. A device of this kind, now coming into general use, is a system in which the user operates the calling mechanism himself, ringing the party's bell, getting a busy signal if the telephone is busy and no reply if the party is out. The system referred to is manufactured by the Automatic Electric Co., Van Buren and Morgan streets, Chicago, Ill.

### Babcock & Wilcox News.

Manufacturers who are interested in recourse to legal authority to protect their trade-marks will find trade-mark news contained in an announcement presented by the Babcock & Wilcox Company of New York. This company says: "A decree has been en-

tered in the case of the Babcock & Wilcox Company against the Aultman & Taylor Machinery Co. for infringement of trade-mark. In the United States Circuit Court for the eastern division of the northern district of Ohio, in favor of the Babcock & Wilcox Company, in which the trade-mark of the Babcock & Wilcox Company is sustained as good and valid. It consists of the word 'steam,' accompanied by a representation of the type of engine known as the 'Aeolipile of Hero,' which consists in part of a sphere. The Aultman & Taylor Machinery Co. is enjoined and restrained from directly or indirectly printing, using, publishing or putting into practice or in any way counterfeiting or imitating said trade-mark or any like or similar thereto."

### Stanley-G. I. Representatives.

Various changes will take place on the 1st of April in the personnel of the Stanley-G. I. Electric Manufacturing Co.'s representatives on the Pacific coast. Mr. F. V. T. Lee has resigned the position of district manager to become assistant to the president, John A. Brittin, of the Pacific Gas & Electric Co. Mr. H. C. Parker, who has been manager of the San Francisco office, will become acting district manager, and G. I. Kinney, who has been manager of the Seattle office, will be associated with Mr. Parker, with headquarters at San Francisco. Mr. Lee's connections with Stanley interests on the Pacific coast date back to the organization of John Martin & Co., who were for many years, especially during the time of the pioneer long-distance electric transmission work of that section, the Stanley Company's Pacific coast representatives. Messrs. Parker and Kinney were also associated with the John Martin Company prior to the time of the Stanley Company establishing its own branch offices on the Pacific coast.

### Ambursen Hydraulic Construction.

The Chicago & Joliet Electric Railway Co., Joliet, Ill., has awarded a contract to the Ambursen Hydraulic Construction Co. of Boston for two dams and two concrete-steel bridges. A novel feature is the utilization of the interior of one of the dams as a bridge below the pleasure lake. The exterior architectural treatment is ornamental. The interior of the dam will be arranged as a grotto, with ferns, mosses, rocks, etc., kept moist by concealed sprinkler pipes. A. S. Kibbe is the company's engineer. The Ambursen Company will also build a concrete-steel dam, developing a 28-foot fall, near Elliott City, Md. A special feature of this development, which is for the Patapsco Electric & Manufacturing Co., is that the powerhouse, containing three 500-horse-power units, is entirely within and underneath the railway, the water passing over the powerhouse. This is due to the necessity of maintaining a railway the full width of the river and because of the large reduction in cost. Mr. H. Von Schon of Detroit is the engineer in charge.

### Regarding Leviathan Belting.

The result of making the virtues of any manufactured article well and widely known is a constantly-increasing demand for it. To this condition may be attributed in part the forced enlargement of the manufacturing facilities of the Main Belting Co. of Philadelphia. During the past year this company has built along modern lines an addition to its plant which will greatly increase its output and enable it better to meet the growing demand for its Leviathan belting. It is claimed that this belting is insensible to conditions that in some instances prohibit the use of leather belting and would wreck the best rubber belts. It can be successfully run exposed to heat, cold, wet, grease, flying sparks, etc., and is said to combine in its manufacture great tensile strength and pliancy, which imparts to it such a grip on the pulley that the full quota of power is frequently secured with a belt running slack. The Main Belting Co. issues a booklet which treats of the capabilities of this power transmitter, which will be sent by mail to those who desire it.

### Traylor Company News.

Mr. Charles C. Knauss, who has been manager of the Allentown (Pa.) Foundry and Machine Works since 1900, has accepted a similar position with the Traylor Manufacturing & Construction Co., which has just completed a new plant at Allentown for manufacturing mining, milling, concentrating, reducing and crushing machinery. Mr. Knauss, formerly for a period of three years with the Bethlehem Steel Co., was founder of the Bethlehem Foundry & Machine Co., and continues a director of this company. When he took charge of the Allentown Foundry and Machine Works 75 men were employed and the output was six tons a day.

This capacity was increased up to the present output of about 60 tons, employing 300 men. In his new position Mr. Knauss will find himself in control of a complete modern plant for the economical production of the machinery designed and sold by the Traylor Engineering Co. of 114 Liberty street, New York, which controls the output of the works. A new line recently added is cement-making machinery. Mr. Knauss assumes charge of the Traylor plant on April 1.

### The D. T. Williams Enlargement.

There is such a steadily-increasing demand for the D. T. Williams specialties that the manufacturer finds it necessary to enlarge the present facilities of production. These regrinding valves and other engineering specialties of the highest grade are marketed by the D. T. Williams Valve Co. of Cincinnati, Ohio. This company has just arranged for the enlargement referred to, having purchased a site 125x247 feet for \$33,000, where it will erect a concrete building to cost \$125,000. Plans and specifications are being prepared by a Cincinnati architect under the direction of President D. T. Williams. A feature of the new plant will be a brass foundry for manufacturing automobile trimmings, and a large garage will occupy the first floor, there being four stories to the building. The D. T. Williams Valve Co. will hold its annual meeting of the stockholders next month to consider increasing capital stock from \$100,000 to \$250,000. This enterprise has been in existence but little more than a year, yet in that time it has earned a permanent place in its chosen field of endeavor, as its valves, lubricators and engineering specialties promptly met recognition from discerning purchasers throughout the country. Mr. F. H. Pund is vice-president; J. W. Tarbill, treasurer, and F. L. Swanberg, secretary.

### Recent Ball Engine Sales.

The most recent sales of Ball steam engines by the builder, Ball Engine Co. of Erie, Pa., are seen in the following list: Atlanta (Ga.) Steel Hoop Co., 150-horse-power single-cylinder engine; Salt Lake (Utah) Hardware Co., 200-horse-power single-cylinder engine; Union National Bank, Pittsburgh, two 300-horse-power tandem-compound engines and one 150-horse-power single-cylinder engine; Cudahy Packing Co., Philadelphia, 70-horse-power single-cylinder engine; Pennsylvania Steel Co., Steelton, three 550-horse-power single-cylinder engines; Massachusetts Cotton Mills, Lowell, 500-horse-power single-cylinder engine; Metropolitan Laundry, San Francisco, two 300-horse-power tandem-compound engines; Edison Electric Illuminating Co., West Chester, Pa., 400-horse-power Corliss engine; Hotel Savoy, Kansas City, 175-horse-power tandem-compound engine; First National Bank Building, Chicago, 350-horse-power vertical cross-compound engine; Pittsburgh (Pa.) Plate Glass Co., two 200-horse-power simple engines; Kilby Manufacturing Co., Cleveland, Ohio, a 200 and a 300-horse-power single-cylinder engine; Milwaukee (Wis.) Coke & Gas Co., 550-horse-power single-cylinder engine; Grand Rapids (Mich.) Railway Co., two 150-horse-power engines; Wolvin Building, Duluth, 150-horse-power single-cylinder engine; New River & Pocahontas Coal Co., Gentry, W. Va., two 750-horse-power cross-compound engines, and Hegeler Bros., Danville, Ill., a 400 and a 550-horse-power four-valve Corliss engine.

### Power and Mining News.

In order to better handle its rapidly-increasing business from the Rocky mountain district, the Power & Mining Machinery Co., Milwaukee, Wis., has opened an office at 312 17th street, Denver, Col. Mr. Henry F. Jurs is district manager and will give his personal attention to inquiries. Mr. Jurs is thoroughly acquainted with his territory through his recent connection with the A. Leschen & Sons Rope Co. of St. Louis as Western manager in Denver. He began his career as a machinist, working his way up through the draughting-room; entered the service of the Union Iron Works, San Francisco, and was regarded by them as a most capable commercial engineer. Leaving that company he joined the Baker & Hamilton Company, San Francisco, in charge of steam-engine and boiler department, and later was manager of the shops at Benicia, Cal. The Power & Mining Machinery Co. recently completed the shipment of a No. 9 McCully rock and ore breaker to the General Crushed Stone Co. at Rock Hill, Pa. This machine is to meet severe conditions, crushing the hardest known grade of trap rock. It will replace several machines which were found unsuited for the arduous work imposed upon them. The Power & Mining Machinery Co. is also building for the General Company, for use in plant at North Leroy, N. Y., a No. 10 McCully breaker, which is one of the two largest rock and ore breakers ever built, the first

one having but recently been shipped to the Little Falls (N. Y.) Stone Co.

### Some C. D. Pruden Contracts.

In the reconstruction of the hundreds of buildings which were destroyed by the great fire in Baltimore two years ago architects and owners have taken especial care to use building materials designed for the protection of the new buildings from fire. The use of metal frames and sash and sheet-metal work is prominent in this reconstruction. Some of the best manufacturers have completed the contracts for this fireproof material, and among them is the C. D. Pruden Company of Baltimore, manufacturer of steel window frames and sash, ceilings, sidings, skylights, store fronts, etc., besides architectural sheet-metal work, stamped zinc and copper ornaments and other similar product. The Pruden contracts included metal frames and sash and sheet-metal work, standard fire doors and windows for William Latham & Son's building; 1200 metal frames and sash for Henry Sonneborn & Son's building; metal frames and sash and sheet metal for Henry Stockbridge's building; metal frames and sash, standard fire doors, roof and sheet-metal work for Daniel Miller Building; same class of work for Hutzler Bros.' annex; metal frames and sash, skylights, cornices and roofing for Lyon, Conklin & Co.; metal frames and sash, skylights, cornices, roofing and all exterior copper work for the Professional Building; metal frames and sash, roofing and sheet-metal work for Thomas C. Basshor; kalamined copper windows, kalamined interior doors and trim, copper roofing, skylights, cornice work and all sheet-metal work generally for the Baltimore & Ohio Building. The Pruden products are attracting the attention of architects and contractors throughout the world, and the company has recently been in correspondence with contractors in South Africa, Germany, Greece, France, Canada and other countries.

### Enlarging Its Plant.

In order to keep pace with its rapidly-increasing business the Power & Mining Machinery Co., Milwaukee, Wis., has awarded contracts for the erection of additions to the shops at Cudahy that will, when completed, more than double the present capacity. These improvements will cost upwards of \$300,000, and will include a 200-foot extension to foundry, installation of a considerable number of machine tools of special design, and an increase in shop force of nearly 300 men, making the total number about 1000. The present capacity of the plant is practically double what it was when the Power & Mining Machinery Co. acquired it by purchase from the Holthoff Machinery Co. in 1903, but the business of the company has been increasing at such a rapid rate that the existing facilities have been found entirely inadequate, as it has been necessary for some months past to rely upon outside foundries for many of the castings used. The excavating work has already commenced, and it is expected that the extension to the foundry will be completed early in June, at which time the new machinery will be installed. Among the principal products manufactured by the company may be mentioned mining, milling and smelting machinery, McCully rock and ore breakers, cement-making machinery, American-Crossley gas engines and suction gas plants, Loomis-Pettibone gas generators for power, manufacturing and metallurgical work, sand-lime-brick machinery, timber-preserving plants and heavy sheet-metal work. The long-continued policy of the Power & Mining Machinery Co. to employ none but those most skilled in its particular line, and providing itself with the best material and tools with which to turn out exceptionally high-grade work, are important factors in the enterprise's rapid growth.

### The Progress of Scientific Lighting.

The progress of scientific lighting was the subject of discussion of representatives of the American Luxfer Prism Co. from 16 different cities who met in Chicago on March 15 and 17. This convention showed plainly the enthusiasm that the company's sales force has produced over the subject of conducting daylight into dark places, that is, applying to factory buildings and other structures the American Luxfer prisms to increase and distribute natural light. The various representatives held discussions over the company's systems and its various advantages and possibilities. During the two days' meeting the managers acquired considerable valuable information in the offices and factories that will assist them in their future endeavors for making their system known throughout the entire country. Besides these business discussions, the representatives were well entertained in a social way. In addition to Mr. Wright, president, and Mr. White, secretary of the American Luxfer

Prism Co., there were present at the meeting the following members of the company's staff: Messrs. W. D. Bradley, G. F. Fairbrass, G. A. Kintz, A. B. Mathews, S. A. Sage and H. W. Knautz, all of the head office at Chicago; A. P. O'Brien of New York, L. W. Marsh of Boston, H. O. Enlign of Philadelphia, A. T. Holzbog of Milwaukee, R. A. Wood of Baltimore, A. W. Gee of Cleveland, J. E. Dwan of St. Louis, E. C. Hoyer of Cincinnati, K. F. Lott of St. Paul, L. S. Chapin of Rochester, C. E. Haackinson of Sioux City, Charles Dregge of Grand Rapids, H. E. Hamilton of Indianapolis, W. H. O'Neill of Vancouver, E. P. Wilkins of Kansas City, and H. F. Ingerson of San Francisco. The American Luxfer Prism Co. is now occupying an entire suite of rooms in the Heyworth Building, Wabash avenue and Madison street, having moved here from its old location on Wabash avenue.

#### American Society for Testing Materials.

Committee "S" on waterproofing materials of the American Society for Testing Materials held its second meeting in the rooms of the Chemist Club in New York city on February 28. As there are two distinct classes of waterproofing materials, the committee has been divided into two subcommittees—"A" and "B." Committee "A" is to study waterproofing materials that are mixed with cements or mortars to render them impervious, and also washes that are applied to the exterior of concrete and masonry. Committee "B" is on bituminous waterproofing; that is, that class of waterproofing where a bitumen is applied to a structure either with or without some medium such as felt and paper and specially-prepared cloth. A brief discussion was entered into at the meeting as to the scope of the work of the committee. It was decided that even though the success of the waterproofing often largely depends on the proper designing of the structure, it was hardly the province of the committee to recommend designs for waterproofing construction. After an interesting discussion as to how the subject of waterproofing materials should be studied, it was decided that while the principal details of this should be left to the chairman of the subcommittees, the subject, however, is of such importance and so often neglected that the necessity of giving it closer attention will be brought before the society in a preamble to the report of the chairman of the committee. The investigation should be along the following lines: (a) Whether or not the waterproofing materials act injuriously on the mediums with which they are applied, such as felt, canvas, etc., or if applied direct to the structure, will they act injuriously on the concrete or metal to which they are applied; (b) a study of the permanency of waterproofing materials under surrounding conditions, such as water-gas drip and acting by oxidation by molecular change, etc. It is the purpose of the committee to issue a circular-letter to all manufacturers of waterproofing materials asking them for descriptions of their material and how it is applied, and whether they would be willing to have their materials examined and the results of such examinations published. It is also the purpose of the committee to send circular-letters to all engineers and architects that might be informed on waterproofing for suggestions of materials and methods of waterproofing. After an exhibition of various waterproofing materials by various members of the committee and a discussion of their practical value the meeting adjourned. The following day was spent by the committee visiting various types of waterproofing in the city. It will be of great aid to the committee to receive any information on the subject of waterproofing, and it is hoped that anyone having any information on the subject, no matter how small, will communicate with the secretary of the committee, Mr. A. W. Dow, District Building, Washington, D. C.

#### Recent De La Vergne Sales.

During the past month the De La Vergne Machine Co. of New York made many sales of its machinery for ice and refrigeration plants. The contracts were too numerous to be mentioned in their entirety, but the following are some of the most important: Aberdeen (Miss.) Oil & Ice Co., 5-ton freezing tank; Union Ice Co., Newark, 20-ton freezing tank and ice cans; John Morrell & Co., Ottumwa, direct-expansion piping for cooling 333,000 cubic feet of cold-storage space; Keeley Brewing Co., Chicago, 200-ton battery of ammonia condensers; D. B. Martin Company, Philadelphia, 120-ton battery of double-pipe brine coolers and 120-ton battery of ammonia condensers; Armour & Co., Chicago, 50-ton battery of ammonia condensers for plant in Jersey City; Gray's Ferry Abattoir Co., Philadelphia, double-pipe brine coolers, capacity 30 tons; New Iberia

(La.) Ice and Bottling Works, 65-ton battery of ammonia condensers; Bergner & Engel Brewing Co., Philadelphia, 40-ton plate-ice plant; Hellman Brewing Co., Waterbury, two double-acting ammonia compressors and 20-ton battery of ammonia condensers; American Brewing Co., New Orleans, 90-ton battery of ammonia condensers; Joseph Stern & Sons, New York, 20-ton battery of ammonia condensers; Welbel Brewing Co., New Haven, direct-expansion piping for beer storage; M. Groh's Sons, New York, De La Vergne cooling tower, capacity 250,000 gallons per day cooled 10 degrees below atmospheric temperature; Pacific Sugar Construction Co., 100-ton machine; J. D. Farrior, Wilson, N. C., 65-ton machine and 20-ton plate-ice plant; Huebner Toledo (Ohio) Breweries, 25-ton battery of ammonia condensers; Kinsan & Co., Indianapolis, 160-ton battery of ammonia condensers; Henry Weinhard Brewery, Portland, Ore., 225-ton machine and 20-ton ice plant; Worcester (Mass.) Cold Storage & Warehouse Co., two 75-ton machines and 300-ton battery of condensers; Thompson-Starrett Company, New York, 40-ton machine; Hopkins & Co., Hartford, 60-ton machine; Trinity Cotton Oil Co., Dallas, Texas, 100-ton machine; Rohe & Bro., New York, double-acting compressors to replace single-acting, increasing capacity 35 to 55 tons; Texas Ice & Cold Storage Co., Galveston, 100-ton battery of ammonia condensers; Consumers' Brewing Co., Erie, 150-ton battery of ammonia condensers; Wellston (Ohio) Brewing & Ice Co., Wellston, Ohio, double-acting compressors to replace present single-acting compressors, increasing capacity from 35 tons to 55 tons; Norborne (Mo.) Electric Light & Power Co., 10-ton refrigerating machine and 4-ton ice-making plant; D. B. Martin Company, Philadelphia, 250-ton refrigerating machine; Houston (Texas) Ice & Brewing Co., 5-ton refrigerating machine and 16-horsepower "Hornsbly-Akroyd" oil engine to drive same; Peter Barbey & Son, Reading, Pa., 50-ton refrigerating machine; Tuscaloosa (Ala.) Ice & Light Co., 24-ton refrigerating machine and ice-making and distilling plant; Seelbach Hotel, Louisville, Ky., 40-ton refrigerating machine; Fries Manufacturing & Power Co., Winston-Salem, N. C., 75-ton refrigerating machine and 15-ton ice plant; Peter Cooper Glue Factory, New York, 75-ton refrigerating machine for cooling glue; John R. Eyres, Paterson, N. J., 5-ton refrigerating machine driven by 13-horsepower "Hornsbly-Akroyd" oil engine; Armour & Co., Chicago, 400-ton refrigerating machine and 150-ton ice plant for South Omaha, Neb., and many other contracts.

#### Scherzer Rolling-Lift Bridges.

During the past year many railroads have been called upon to increase their tracks to accommodate rapidly-growing traffic. This has caused the removal of a number of single and double track swing bridges and their replacement by modern rolling-lift bridges. With this modern type of movable bridge any number of parallel tracks can be added from time to time without disturbing existing traffic. Of bridge equipment of this character the Scherzer Rolling-Lift Bridge Co., 1616 Monadnock Block, Chicago, is the manufacturer and states that one of the inherent limitations of the center-plier swing bridge is that it cannot be enlarged or widened. It must always be discarded and removed, for if a new swing bridge were constructed alongside of an existing swing bridge it would be impossible to operate either of them, because they would interfere with each other. Recent and contemplated installations of the Scherzer Rolling-Lift Bridge Co. are those which the New York, New Haven & Hartford Railroad has recently placed into service, consisting of two double-track lift bridges, built side by side, forming a four-track bridge at Westport, Conn. The two double-track Scherzer rolling-lift bridges forming the new four-track bridge at Coscob, Conn., are rapidly nearing completion and are expected to be placed into service within a month. The two double-track Scherzer bridges across the Housatonic river will be in service within a few months. The substructure for the long-span Scherzer bridge across the Connecticut river is nearing completion, and the manufacture of the superstructure is making rapid progress in shops. This bridge will be a double-track structure, replacing a single-track swing bridge. It is intended to be enlarged to a four-track bridge within a few years by building another double-track lift bridge alongside of the first one and operating both of them either jointly or separately as desired with one operator. Work has recently commenced on the four-track bridge across the Nononset river, replacing a double-track swing bridge. The plans of a six-track bridge across the Eastchester bay and another six-track bridge across the Bronx river have been completed. These new bridges will re-

place one double-track swing bridge and one four-track swing bridge no longer adequate for the increased traffic. The bridges are designed to carry the heaviest engine loadings, and will accommodate and facilitate with increased safety the rapidly-growing traffic of the New York, New Haven & Hartford Railroad. The large double-track Scherzer rolling-lift bridge, having a movable span of 160 feet, for the Newburgh & South Shore Railway, Cleveland, Ohio, has proved so rapid, successful and economical in operation that the Baltimore & Ohio Railroad will replace its single-track swing bridge at an adjacent crossing with a double-track Scherzer rolling-lift bridge. The railroad company is also building a long-span single-track single-leaf Scherzer bridge, 230-foot span center to center of bearings, to replace a center-plier swing bridge near the mouth of the Cuyahoga river. The new bridge will be erected in its open position without interfering with the railroad traffic across the present bridge or the vessel traffic on the river, and when completed will be operated into its closed position and immediately used by the very heavy and frequent railroad traffic at this point without causing any delay. The Scherzer bridge constructed across the Suir river, Ireland, for the Fishguard & Rosslare Railways has been completed. It is intended to facilitate the traffic on high-speed line, which has been constructed to shorten the time and distance between Queenstown, Cork and the south of Ireland and London. The Scherzer bridge constructed across the Swale river for the Southeastern & Chatham Railway on the fast-mail route to the Continent is said to have been so rapid in operation and satisfactory that it has induced the Dutch Railroad Co. to adopt a three-track Scherzer bridge, now under construction across the Haarlem river on its main-line fast-mail route. The Buenos Aires Great Southern Railroad is replacing its single-track bridge across the Riachuelo river, Buenos Aires, with a modern double-track Scherzer bridge. In addition to the large number of railroad Scherzer rolling-lift bridges constructed and in successful operation for the principal railroad companies in the United States and abroad, more than 40 electric-railway and highway bridges of this type have been constructed and placed under construction.

#### TRADE LITERATURE.

##### Reminder of Garvin Machines.

A reminder of the Garvin products in the form of a pamphlet is being distributed by the Garvin Machine Co., whose home office, salesrooms and works are at Spring and Varick streets, New York. The pamphlet contains illustrations of the various machines manufactured by the Garvin Machine Co., with condensed data concerning them, and is especially convenient for pocket use.

##### Some Roebling Products.

The John A. Roebling's Sons Company, Trenton, N. J., has issued a booklet entitled "Some Roebling Products." This publication gives data on and illustrates the company's plant, the great suspension bridges in New York and various other structures of a similar character, besides cableways, tramways, galvanized-wire strand, copper telephone wire, trolley wires, insulated electric wires, etc.

##### Condensed Catalogue of Blowers.

The New York Blower Co. has issued a condensed catalogue which is just the thing for a busy man who has no time to look through a complete set of catalogues. This catalogue shows illustrations of all styles of fans and heaters made by the company, besides giving in tabulated form the principal dimensions and prices. The New York Blower Co. will send a copy to anybody applying for it. The offices are at 25th Place and Stewart avenue, Chicago.

##### Cementology.

The monthly publication, *Cementology*, has been issued for March. This publication devotes its March issue to a general view of the cement mill of the Whitehall Portland Cement Co. of Cementon, Pa., together with views of its quarry immediately after a heavy blast of dynamite has been exploded. There is also an interesting description concerning a recent trip of business men to the plant of the company. The booklet is published and issued by the Whitehall Portland Cement Co.; main offices in Philadelphia, Pa.

##### Crematories for Garbage, Refuse, etc.

Those who contemplate the erection of crematories for whatever purpose will be interested in the information that a pamphlet containing descriptive data relative to crematories of different types can be had by

applying to the Sanitary Engineering Co., 237 Broadway, New York. This company's products are the outgrowth of six years' experience in building appliances for and studying the principles of burning wet wastes. It has installed crematories in different sections of the country which are now said to be in successful operation.

##### Of Interest to Manufacturers.

Messrs. Dodge & Day, engineers, of Philadelphia, have issued a pamphlet describing the new factory in Baltimore, Md., recently completed for Wm. Knabe & Co., makers of pianos. The building was designed by Dodge & Day and erected and equipped under their supervision. This commission was the direct outcome of one of the preliminary reports with which these engineers have had such a large and varied experience. A bulletin published by them some time ago, under the title of "Betterment Reports," gave a full explanation of the method pursued in preparing these reports, which are, in effect, a careful investigation of the conditions of their clients' works and shops, with full recommendations for improvement, all put in an unusually comprehensive and concise form.

##### Blytheville's Advantages.

For the purpose of exploiting the industrial advantages of Blytheville, Ark., both manufacturing and agricultural, the Blytheville Business Club is distributing a very interesting pamphlet containing views of different sections of the town and data reciting the advantages offered in that section. Blytheville is located in the St. Francis valley in the northeastern part of Arkansas, and is supported by the timber and agricultural resources of the surrounding country. The streets are 60 feet wide and well lighted by electricity. A survey is being made for a water-works plant which will probably be installed within a year. Among other things set forth in the pamphlet are the school and church facilities enjoyed by the town, together with a statement relative to climatic conditions and the labor situation. The Blytheville Business Club will supply those who are interested with a copy of the pamphlet referred to.

##### Reinforced Concrete Construction.

Reinforced concrete is a technical name for a method of fireproof construction in which the materials used are cement, sand, broken stone and steel. Good building material must resist the pressure and pull of weights and stresses. In reinforced concrete it is claimed that concrete resists the pressure and steel the pull, making it very clear that the proper combination of these two gives any structure capacity to carry weights. "Tests and Other Facts Concerning the Kahn Trussed Bar" is the name of a booklet distributed by the Trussed Concrete Steel Co. of Detroit, Mich., which presents a number of illustrations and descriptive data relative to reinforced concrete construction employing the Kahn Trussed Bar. As far as strength is concerned, it is claimed tests have shown that this system is not only capable of carrying the required weight, but develops additional strength that does not enter into calculation. The Trussed Concrete Steel Co. has published technical books and pamphlets which will be furnished to engineers, architects, owners or contractors whenever desired.

##### Rope Transmission.

In view of the general use to which rope transmission of power is being applied in various capacities, it is interesting to note that a pamphlet on this method of transmission is being distributed which contains information relative to some of the appliances employed for transmitting purposes. While the method of rope transmission is not a new one, it is said to be only within the last 10 years that the principles have been thoroughly understood, and drives correctly designed and erected. When the method was first introduced it was used in places where it was impossible for either gears or belts to accomplish the work, consequently the drives erected were crude affairs which frequently gave trouble. But with the passing of years so many improvements have been made that this method of transmitting power is becoming popular. Compared with gearing, it is said that rope transmission is less expensive in first cost, installation and maintenance, and is not subject to the great loss of power due to wear. The pamphlet referred to above as containing information of this character is issued by the George V. Cresson Company, engineers, founders and machinists, Philadelphia and New York.

##### "Compressed Air" Announcement.

"Compressed Air" announces that with its issue of May it will appear in enlarged form and under new management. It will be pub-



lished by the Kobbe Company, 90-92 West Broadway, New York. For 10 years "Compressed Air" has been devoted exclusively to the field of compressed air in all its applications. This field, however, has broadened so materially in recent years that a more comprehensive periodical is needed to fully meet the new conditions. With the May number the size of "Compressed Air" will be changed to 7x10; it will be printed on better paper, and in outward form will be on a par with the best-printed magazines now published. A special feature will be a department devoted to correspondence, a discussion of which will be encouraged among its readers. But probably the most valuable information will be contained under the heading "Practical Items for Practical Men," where data of direct and practical value to compressed-air users will be discussed. Mr. W. L. Saunders, M. Am. Soc. C. E., will remain as editor-in-chief; Mr. W. R. Hulbert, M. E., will be managing editor, and P. F. Kobbe, Jr., will be business manager. Contributions and correspondence from those interested in the uses and development of compressed air for industrial purposes will be gladly received and made use of if acceptable, and requests for information will be given prompt and courteous attention. All correspondence should be addressed to the Kobbe Company, 90-92 West Broadway, New York.

#### Continental Gln Co.'s Catalogue.

It is claimed that the greatest improvement of recent years in the handling of cotton has been through the introduction of system outfits. In 1883 R. S. Munger of the Continental Gln Co. of Birmingham, Ala., introduced a pneumatic system of elevating and cleaning cotton. This consisted of a pneumatic elevator which took the cotton out of the wagon or bin, elevated it above the gins, cleaned and delivered it upon a spiked belt which distributed it into a battery of feeders. In the feeder it was thoroughly cleaned again before entering the gins, from which it was delivered into a common lint flue attached to a battery condenser which separated the air from the lint and formed a continuous lat automatically fed into a double-box press. This system of elevating, cleaning, ginning and pressing the cotton in one operation attracted widespread attention, and from it developed several systems which are now well known, among them the Pratt, Winship, Smith, Eagle and Munger systems, all of which are illustrated and presented in detail by the Continental Gln Co.'s general catalogue G-3, which contains more than 150 pages and over 100 full-page illustrations, including one-half dozen double-page illustrations in actual colors of the several system outfits alluded to above. The reproduction in colors of all parts of the machinery gives a very clear idea of the general appearance of each as it would be when placed in the gin-house. The catalogue also shows many changes in design and arrangement of the machinery as shown in previous catalogues.

#### Regarding Burroughs Systems.

Public work is being recognized as a public business that must be given attention in a businesslike and systematic way. Information as to how to reduce the cost of operating a system by increasing its efficiency and how to place your work on such a basis that you may be master of every detail is furnished by a booklet issued by the Burroughs Adding Machine Co. of Detroit, Mich., manufacturer of adding and listing machines. The booklet contains interesting data regarding the Burroughs system as executed by the machines of the company's manufacture. It is stated that there are over 1500 city, county and State offices using the adding and listing machine as a mechanical aid to clerks and accountants. Its most important duty being to broaden the application of money-saving systems by increasing the efficiency of clerks required to operate them, and at the same time insuring accuracy in handling the small details that make up the grand total of work done. It is claimed for this machine that it never makes mistakes, and there is no excuse for the person who makes mistakes with it, as the proof of the work is always before him perfectly legible. Its speed and infallibility are said to be most strikingly shown in the work of public offices where it is necessary to add a number of items, such as recording cash received in a tax office or verifying cash payments from the treasurer's office. Beside general information which the booklet contains, there are illustrations showing different forms that may be used with the machine, such as those of tax receipts, tabulated orders, abstract of tax rolls, disbursement sheet, monthly and annual statements, etc., together with an illustration showing the electric Burroughs adding and listing machine. Send for a copy.

## FINANCIAL NEWS

The MANUFACTURERS' RECORD invites information about Southern financial matters. Items of news about new institutions, dividends declared, securities to be issued, openings for new banks, and general discussions of financial subjects bearing upon Southern matters.

#### Review of the Baltimore Market.

Office MANUFACTURERS' RECORD,  
Baltimore, Md., March 28.

Dullness was the chief characteristic of the Baltimore stock market during the past week. Outside of some trading in United Railways issues, there was little doing.

In the dealings United Railways common sold at 18 1/4; the trust certificates from 18 1/2 to 18 3/4; the incomes from 74 1/2 to 75 1/2, and the income trust certificates from 73 1/2 to 74; the 4s from 92 1/2 to 92 3/4. Consolidated Gas changed hands from 87 1/2 to 87; the 6s at 106 1/4 and 106 1/2, and the 5s at 112 1/4. Seaboard new common sold at 31 to 31 1/2, and the new second preferred from 60 to 61; Seaboard 4s at 90 1/4 to 90, and the 10-year 5s at 103; Cotton Duck 5s at 86 1/4 to 87, and Consolidated Cotton Duck common at 12 1/2. G. B. S. common was traded in at 8 1/4; the incomes from 33 to 33 1/2, and the 1sts from 61 to 60 1/2.

Bank stocks sold as follows: Citizens', 28 1/4 to 28 1/2; Farmers and Merchants', 54; Mechanics', 26; Merchants', 180; Western, 38; First National, 145.

Trust and other company stocks sold thus: Union Trust, 55; Fidelity & Deposit, 140; Maryland Life Insurance, 30; Maryland Casualty, 56; Maryland Trust common, 120 to 117; do. preferred, 130.

Other securities were traded in as follows: Houston Oil, 11 1/2 to 11 1/4; do. preferred, 47 1/2 to 47 3/4; Atlantic Coast Line 4s, 99 1/4 to 99 3/4; do. Connecticut 4s, certificates, 5-20s, 93 1/2 to 94; Baltimore City 5s, 1916, water, 114 to 114 1/4; do. 3 1/2s, 1940, 105 1/2 to 105; do. do. 1930, 105 to 104 1/2; do. do. 1928, 104 1/2; Western Maryland 4s, 87 1/4 to 87 3/4; Consolidation Coal, 94; Baltimore, Sparrows Point & Chesapeake 4 1/2s, 97 1/4 to 97 3/4; Atlantic Coast Line of Connecticut stock, 42 1/2; Georgia, Carolina & Northern 5s, 111 1/4 to 111; Virginia Centuries, 95 1/4; Alabama Consolidated Coal & Iron preferred, 93; Atlantic Coast Line new 4s, certificates, 93 1/2; Carolina Central 4s, 97; Norfolk Railway & Light 5s, 100 to 100 1/4; Northern Central Railway stock, 103 to 103 1/2; Georgia & Alabama Consolidated 5s, 110 1/2; West Virginia Central 6s, 108; North Baltimore 5s, 120 1/4; Baltimore Brick common, 10; Atlantic Coast Line rights, 5 1/4; Baltimore & Ohio preferred, 95 1/2; Suffolk & Carolina 5s, 96 1/2; Colorado Fuel, 66 1/4.

#### SECURITIES AT BALTIMORE.

Last Quotations for the Week Ended  
March 28, 1906.

Railroad Stocks.	Par.	Bid.	Asked.
Atlanta & Charlotte.....	100	170	175
Atlantic Coast Line of Conn.....	100	415	430
Georgia Southern & Florida.....	100	30	37
Georgia Sou. & Fla. 1st Pref.....	100	100	100
Georgia Sou. & Fla. 2d Pref.....	100	75	80
Maryland & Pennsylvania.....	100	27	30
Seaboard Railway Common.....	100	30	32 1/2
Seaboard Railway Preferred.....	100	31	32
Seaboard Company 2d Pref.....	100	60 1/2	61
United Railways & Elec. Co.....	50	18	18 1/2
<b>Bank Stocks.</b>			
Citizens' National Bank.....	10	28	29
Commercial & Far. Nat. Bank.....	100	130	140
Com. & Far. Nat. Bk. Blue Cfs.....	100	140	150
Drovers & Mech. Nat. Bank.....	100	240	250
Farmers & Mer. Nat. Bank.....	40	53	55
First National Bank.....	100	145	150
German-American Bank.....	100	107	110
Merchants' National Bank.....	100	180	185
National Bank of Baltimore.....	100	118	122
National Howard Bank.....	30	11 1/2	12 1/2
National Marine Bank.....	30	27	27
National Mechanics' Bank.....	10	25 1/2	26
National Union Bank of Md.....	100	120	120
Western National Bank.....	20	38	39
<b>Trust, Fidelity and Casualty Stocks.</b>			
Fidelity & Deposit.....	50	135	140
International Trust.....	100	150	155
Maryland Casualty.....	25	54 1/2	56
Maryland Trust.....	100	116	120

Maryland Trust Preferred.....	100	127 1/2	128 1/2
Mercantile Trust & Deposit.....	50	140	143
Union Trust.....	50	53 1/2	55

#### Miscellaneous Stocks.

Ala. Con. Coal & Iron Pref.....	100	92 1/2	95
Consolidated Gas.....	100	85	87 1/2
Consolidated Cotton Duck.....	50	12	13
Consolidated Cotton Duck Pfd.....	50	33	35
Consolidation Coal.....	100	90	97
G. B. & S. Brewing Co.....	100	9	9

#### Railroad Bonds.

Atlanta & Charlotte 1st 7s, 1907.....	103	103	103
Atlan. Coast Line 1st Con. 4s, 1952.....	99 1/2	99 1/2	99 1/2
Atlantic Coast Line 4s, Cfs., 1952.....	93 1/4	94	94
Balto. & Harriburg Ext. 5s, 1938.....	108	108	108
Carolina Central 4s, 1949.....	96 1/2	98	98
Char., Col. & Aug. 1st 5s, 1910.....	117 1/2	117 1/2	117 1/2
Char., Col. & Aug. 2d 7s, 1910.....	110	110	110
Col. & Iron Railway 5s, 1929.....	104	106	106
Columbia & Greenville 1st 6s, 1916.....	113 1/4	113 1/4	113 1/4
Georgia & Alabama 5s, 1945.....	110 1/2	110 1/2	110 1/2
Georgia, Car. & North. 1st 5s, 1929.....	111	112	112
Georgia Pacific 1st 6s, 1922.....	121	123	123
Georgia South. & Fla. 1st 5s, 1945.....	112 1/2	112 1/2	112 1/2
Maryland & Pennsylvania 4s, 1951.....	93	96	96
Petersburg, Class A 5s, 1926.....	113 1/4	113 1/4	113 1/4
Petersburg, Class B 6s, 1926.....	127 1/2	127 1/2	127 1/2
Piedmont & Cum. 1st 5s, 1911.....	100	100	100
Piedmont Valley 1st 5s, 1914.....	115 1/4	115 1/4	115 1/4
Raleigh & Augusta 1st 6s, 1926.....	124	126	126
Richmond & Danville Gold 6s, 1915.....	113	113	113
Savannah, Fla. & West. 5s, 1934.....	115 1/4	118	118
Seaboard Air Line 4s, 1950.....	90	90 1/2	90 1/2
Seaboard Air Line 5s, 10-year, 1911.....	102 1/2	103 1/2	103 1/2
Seaboard Air Line 5s, 3-year.....	99 1/2	99 1/2	99 1/2
Seaboard & Roanoke 6s, 1916.....	107	108	108
Seaboard & Roanoke 5s, 1926.....	111 1/2	112	112
Suffolk & Carolina 5s, 1952.....	97 1/2	97 1/2	97 1/2
Virginia Midland 2d 6s, 1914.....	107	107	107
Virginia Midland 3d 6s, 1916.....	110	110	110
Virginia Midland 4th 3-4-5s, 1921.....	109 1/2	110 1/2	110 1/2
Virginia Midland 5th 5s, 1926.....	111	112	112
Western Maryland new 4s, 1952.....	87	87 1/2	87 1/2
West. North Carolina Con. 6s, 1914.....	112 1/2	112 1/2	112 1/2
West Virginia Central 1st 6s, 1911.....	108	108 1/2	108 1/2
Williamington & Wel. Gold 5s, 1935.....	117 1/2	117 1/2	117 1/2

#### Street Railway Bonds.

Anacostia & Potomac 5s, 1949.....	106 1/2	107	107
Baltimore City Passenger 5s, 1911.....	106 1/2	106 1/2	106 1/2
Baltimore City Passenger 1st 5s, 1923.....	106 1/2	106 1/2	106 1/2
Charleston City Railway 5s, 1923.....	106 1/2	106 1/2	106 1/2
Macron Rwy. & L. 1st Con. 5s, 1953.....	100	100 1/2	100 1/2
Norfolk Railway & Light 5s.....	100	100 1/2	100 1/2
North Baltimore 5s, 1942.....	119 1/4	119 1/4	119 1/4
United Railways 1st 4s, 1949.....	92 1/2	92 1/2	92 1/2
United Railways Inc. 4s, 1949.....	74 1/2	75	75

#### Miscellaneous Bonds.

Alabama Consol. Coal & Iron 5s.....	94 1/2	94 1/2	94 1/2
Atlanta Gaslight 1st 5s, 1947.....	104	104	104
Consolidated Gas 6s, 1910.....	106 1/2	106 1/2	106 1/2
Consolidated Gas 5s, 1929.....	112 1/2	112 1/2	112 1/2
Consolidated Gas 4 1/2s, Cfs.....	101	101	101
G. B. & S. Brewing 2d Income.....	69 1/2	71	71
G. B. & S. Brewing 3d Income.....	33 1/2	33 1/2	33 1/2
Maryland Telephone 5s.....	97	97	97
Mt. V. & Woodly Cot. Duck 5s.....	86 1/2	87 1/2	87 1/2
United Elec. Light & Power 4 1/2s.....	97	99	99

#### SOUTHERN COTTON-MILL STOCKS

Quotations Furnished by Hugh Mac-  
Rae & Co., Wilmington, N. C., for  
Week Ending March 24.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	56	59
Alken Mfg. Co. (S. C.).....	85	89
Anderson Cotton Mills (S. C.).....	104	104
Arkwright Mills (S. C.).....	120	123
Augusta Factory (Ga.).....	80	85
Avondale Mills (Ala.).....	98	100
Beltton Mills (S. C.).....	108	110
Bibb Mfg. Co. (Ga.).....	122	122
Brandon Mills (S. C.).....	107	111
Cabarrus Cotton Mills (N. C.).....	137	137
Chadwick Mfg. Co. (N. C.) Pfd.....	102	102
Chilquola Mfg. Co. (S. C.).....	90	91
Clifton Mfg. Co. (S. C.).....	123	128
Clifton Mfg. Co. (S. C.) Pfd.....	102	105
Clinton Cotton Mills (S. C.).....	135	146
Columbus Mfg. Co. (Ga.).....	98	98
Courtenay Mfg. Co. (S. C.).....	100	103
Dallas Mfg. Co. (Ala.).....	87	95
Darlington Mfg. Co. (S. C.).....	60	75
Eagle & Phenix Mills (Ga.).....	125	126
Easley Cotton Mills (S. C.).....	125	136
Enoree Mfg. Co. (S. C.).....	77	81
Enoree Mfg. Co. (S. C.) Pfd.....	100	102
Enterprise Mfg. Co. (Ga.).....	86	92
Exposition Cotton Mills (Ga.).....	200	200
Gaffney Mfg. Co. (S. C.).....	85	90
Gainesville Cotton Mills (S. C.).....	50	50
Granby Cot. Mills (S. C.) 1st Pfd.....	59	66
Granville Mfg. Co. (S. C.).....	160	166
Greenwood Cotton Mills (S. C.).....	98	98
Grendel Mills (S. C.).....	110	110
Henrietta Mills (N. C.).....	206	206
King Mfg. Co. John P. (S. C.).....	97	103
Lancaster Cotton Mills (S. C.).....	103	106
Lancaster Cot. Mills (S. C.) Pfd.....	97	97
Langley Mfg. Co. (S. C.).....	92	96
Laurens Cotton Mills (S. C.).....	160	164
Limestone Mills (S. C.).....	104	104
Lockhart Mills (S. C.).....	100	102
Lockhart Mills (S. C.) Pfd.....	97	101
Louis Mills (N. C.).....	94	94
Louis Mills (N. C.) Pfd.....	102	102
Marlboro Cotton Mills (S. C.).....	69	76
Mayo Mills (N. C.).....	165	186
Mills Mfg. Co. (S. C.).....	106	106
Mills Mfg. Co. (S. C.) Pfd.....	100	100
Monaghan Mills (S. C.).....	104	104
Monarch Cotton Mills (S. C.).....	88 1/2	88 1/2
Nowberry Cotton Mills (S. C.).....	110	116
Norris Cotton Mills (S. C.).....	102	104
Orell Mfg. Co. (S. C.) 1st Pfd.....	80	97
Oranburg Mfg. Co. (S. C.).....	80	97
Orr Cotton Mills (S. C.).....	106	106
Pae Mfg. Co. (S. C.).....	173	173 1/2
Pae Mfg. Co. (S. C.) Pfd.....	100	104
Pelzer Mfg. Co. (S. C.).....	168	175
Piedmont Mfg. Co. (S. C.).....	169	171
Poe Mfg. Co. F. W. (S. C.).....	121	133
Raleigh Cotton Mills (N. C.).....	99	100
Richland Cot. Mills (S. C.) Pfd.....	51	62
Roanoke Mills (N. C.).....	128	128
Saxon Mills (S. C.).....	100	105
Sibley Mfg. Co. (Ga.).....	64	68
Southern Cotton Mills (N. C.).....	80	80
Spartan Mills (S. C.).....	140	146
Springstein Mills (S. C.).....	100	100
Trilon Mfg. Co. (Ga.).....	131	142
Trueman Mills (S. C.).....	150	150
Victor Mfg. Co. (S. C.).....	112	116
Warren Mfg. Co. (S. C.).....	97	97
Warren Mfg. Co. (S. C.) Pfd.....	105	105
Washington Mills (Va.).....	18	26
Washington Mills (Va.) Pfd.....	95	99
Whitney Mfg. Co. (S. C.).....	140	140
Wiscasset Mills (N. C.).....	119	136
Woodruff Cotton Mills (S. C.).....	105	106

Quotations Furnished by William S.  
Glenn, Broker, Spartanburg, S. C.,  
for Week Ending March 24.

	Bid.	Asked.
Abbeville Cotton Mills (S. C.).....	95	99
Aetna Cotton Mills (S. C.) Pfd.....	70	70
Alken Mfg. Co. (S. C.).....	87	90
American Spinning Co. (S. C.).....	108	108
Anderson Cotton Mills (S. C.).....	103	103
Aracadia Mills (S. C.).....	89	93
Arkwright Cotton Mills (S. C.).....	120	120
Augusta Factory (Ga.).....	80	85
Avondale Mills (Ala.).....	97	100
Beltton Mills (S. C.).....	107	110
Bibb Mfg. Co. (Ga.).....	122	122
Brandon Mills (S. C.).....	107	111
Brogan Mills (S. C.).....	77	82
Cabarrus Cotton Mills (N. C.).....	137	137
Chadwick Mfg. Co. (N. C.) Pfd.....	102	102
Chilquola Mfg. Co. (S. C.).....	91	100
Clifton Mfg. Co. (S. C.).....	123	128
Clifton Mfg. Co. (S. C.) Pfd.....	102	105
Clinton Cotton Mills (S. C.).....	135	146
Columbus Mfg. Co. (Ga.).....	98	98
Courtenay Mfg. Co. (S. C.).....	100	103
Dallas Mfg. Co. (Ala.).....	87	95
Darlington Mfg. Co. (S. C.).....	60	75
Eagle & Phenix Mills (Ga.).....	125	126
Easley Cotton Mills (S. C.).....	125	136
Enoree Mfg. Co. (S. C.).....	77	81
Enoree Mfg. Co. (S. C.) Pfd.....	100	102
Enterprise Mfg. Co. (Ga.).....	86	92
Exposition Cotton Mills (Ga.).....	200	200
Gaffney Mfg. Co. (S. C.).....	85	90
Gainesville Cotton Mills (S. C.).....	50	50
Granby Cot. Mills (S. C.) 1st Pfd.....	59	66
Granville Mfg. Co. (S. C.).....	160	166
Greenwood Cotton Mills (S. C.).....	98	98
Grendel Mills (S. C.).....	110	110
Henrietta Mills (N. C.).....	206	2

capital stock, \$50,000; surplus fund, \$70,000; undivided profits (net), \$1764; circulation, \$12,500; total deposits, \$152,365; total resources, \$316,629. A. H. Neathery is president; J. L. Chapman, cashier, and R. W. Rike, Jr., assistant cashier.

The American National Bank of Austin, Texas, reports January 29, 1906, loans and discounts, \$996,635; cash in vault and in other banks, \$814,822; capital, \$200,000; surplus and profits, \$171,781; circulation, \$200,000; deposits, \$1,467,750; total resources, \$2,039,531. G. W. Littlefield is president; John H. Houghton and H. A. Wroe, vice-presidents; C. P. Randolph, cashier, and R. C. Roberdeau, assistant cashier.

The First National Bank of Jackson, Tenn., reports January 29, 1906, loans and discounts, \$634,438; cash resources, \$381,779; capital stock paid in, \$100,000; surplus fund, \$20,000; other undivided profits, \$8853; circulation, \$100,000; deposits, \$923,686; total assets, \$1,152,539. John L. Wisdom is president; John R. McKinzie, vice-president; J. W. Vanden, cashier; W. A. Caldwell, assistant cashier, and C. G. Bond, attorney.

The Corpus Christi National Bank of Corpus Christi, Texas, reports capital \$100,000 and surplus \$90,000.

#### New Corporations.

The Tulch State Bank of Tulch, Texas, has been organized with \$10,000 capital.

The First State Bank of Carney, Texas, has been organized with J. Frank Potts, cashier.

Mr. L. O. Benton of Monticello, Ga., will, it is said, establish a bank at Waycross, Ga.

The Chambers County Bank of Lafayette, Ala., capital \$50,000, has been organized by C. E. Collins and others.

The City National Bank of Dublin, Ga., has begun business. J. E. Smith, Jr., is president, and Albert R. Arnau, cashier.

The Commercial Bank of Checotah, I. T., capital \$10,000, has been incorporated by D. L. Nichols, G. G. Hendrix, A. H. Livingston and M. C. Livingston.

The State Savings Bank has been organized at Hattiesburg, Miss., with \$250,000 capital by J. P. Carter, F. L. Peck, J. T. Jones, L. L. Major and others.

It is reported that a new national bank is to be established at Houston, Texas, with \$200,000 capital, Capt. Edward Kennedy being the principal promoter.

Articles of incorporation for a new bank to be located at Fallis, O. T., with \$10,000 capital have been filed by F. S. Patton and L. V. Ford of Edmond.

The First National Bank of Walnut Springs, capital \$30,000, has been authorized to begin business with J. W. Rudasill, president, and J. W. Mingus, cashier.

The Citizens and Mechanics' Bank of Portsmouth, Va., will, it is reported, begin business in the Commercial Building about April 15 with S. Cleburne Browne as cashier.

Plans are reported complete for the establishment of a \$100,000 State bank and trust company at Temple, Texas. Hon. J. M. Roseborough of Victoria is head of the institution.

The Southwestern Underwriters' Co. of Louisville, Ky., has been incorporated with \$10,000 capital stock by J. A. Holmboe, Richard H. Hundley, W. H. Slaughter, Jr., and J. W. James.

The First State Bank of Tahoka, Texas, capital \$10,000, has been granted a charter. The directors are O. L. Slaton, W. S. Posey, W. D. Nevela, Jack Alley and G. W. Coughran.

The Farmers and Merchants' National Bank of Walnut Springs, Texas, capital \$25,000, has been approved. The organizers are C. C. Rushing, J. A. Rushing, E.

B. McNeil, W. Guyton and W. H. Seale. The Tyrone State Bank of Tyrone, O. T., has been incorporated with \$10,000 capital by W. H. Wright of Tyrone, C. R. Wright of Beaver, D. E. Woods and J. E. George of Liberal, Kan.

The Hanover Investment Co. of St. Louis, Mo., has been incorporated with \$350,000 capital by Alexander R. Russell, W. J. Holbrook, George F. Trower, Jr., S. T. Bixby and E. W. Banister.

The Farmers and Bankers' Warehouse Building Association of Houston, Texas, capital \$10,000, has been granted a charter. The incorporators are Dave M. Shapira, M. L. Shapira and J. M. Meyer.

The New Ulm State Bank of New Ulm, Texas, has elected the following officers: E. C. Find, president; J. R. Kubena, first vice-president; W. A. Mathaei, second vice-president; Frank Matejka, cashier.

The First National Bank of Council Hill, I. T., capital \$25,000, has been approved. The organizers are Charles W. Mandler, F. P. Tschanner, William J. Cook, W. E. Gordon and A. G. Harmon.

The Woodward Investment Co. of Atlanta, Ga., capital \$50,000, has been granted a charter. The incorporators are D. B. Thompson of Connecticut and David Woodward and W. B. Disbro of Atlanta.

Articles of incorporation for the First Bank of Knoxville, Ark., capital \$5000, have been filed by M. H. Hobbs, John Shields, James Painter, W. M. Phillips, J. R. Nash, J. F. Bowman and J. L. Ashley.

The First National Bank of Cement, O. T., capital \$25,000, has begun business with J. Rutterback, president; Travis Latimer, vice-president; E. W. Power, cashier, and Jessie F. Notson, assistant cashier.

The Bank of Inman at Inman, S. C., capital \$10,000, has filed articles of incorporation. The incorporators are J. H. Ballinger, J. H. Gosnell, J. R. Gibson, J. A. Brock, J. D. Humphries and Arch B. Calvert.

The Citizens' State Bank of Blair, O. T., capital \$10,000, has been incorporated by J. O. Tinsley, John W. Reid, H. Hancock, Doc Bellows, Perry Steeds and J. R. Hullum of Blair and C. W. Edwards of Warren.

The Hebrew Building and Loan Association has been incorporated at Baltimore, Md., with \$5000 capital by Paul Himmelfarb, Fabius N. Himmelfarb, Louis Sody, Jacob Hettleman and Isaac Yaniger.

The Harewood Permanent Building and Loan Association, capital \$520,000, has been incorporated at Baltimore, Md., by Edw. McIntyre, Alex. S. Gage, Cary D. Hall, Jr., John C. Bell and George E. Collison.

A new \$25,000 bank is reported organized at Pitts, Ga., with C. O. Denton, president; W. B. Greeson, vice-president, and T. W. Mixon, L. C. Tishaw, Grey Chandler, J. M. King and I. N. McAllister, directors.

The Highland Savings & Trust Co. of Baltimore, Md., capital \$50,000, has been incorporated by John J. Dotterwich, Geo. S. Mann, Charles W. Nash, Henry H. Sinclair, Wm. T. Detrick and Wm. S. Gordy, Jr.

The First State Bank of Seagoville, Texas, has been incorporated with \$10,000 capital by D. E. Waggoner of Dallas, M. E. Hulsey, T. C. Andrews, H. R. Anderson, B. M. Crawford and J. L. Ard, all of Seagoville.

It is reported that W. P. Hilland, cashier of the Planters' Bank; J. M. Rainey, A. N. Beattie, D. A. Scott, R. H. Wildberger and others are promoting a plan to establish a new bank at Jones-town, Miss.

The Empire Life Insurance Co. of Atlanta, Ga., capital \$100,000, has been granted a charter. The incorporators are William W. Reid, S. C. Calloway, C. A. Langford, Thomas M. Calloway and Samuel Burnett.

The Texas National Life Insurance Co. of Austin, Texas, capital \$500,000, has been approved. The incorporators are J. L. Hume, W. H. Richardson, M. A. Taylor, Abner H. Cook and George T. Hume, all of Austin.

It is reported that another new bank is to be established at Houston, Texas, with \$300,000 capital, among those interested being Jonathan Lane, W. T. Eldridge, Ed. Arnim, A. A. Woerhide, Chas. Boedker and others.

The Farmers and Merchants' Bank of Osceola, O. T., has filed articles of incorporation. Business, it is said, will begin June 1 with Dr. E. D. Miles, president; George H. Wheeler, vice-president, and R. E. Porta, cashier.

The Farmers' State Bank of Capron, O. T., capital \$10,000, has been granted a charter. The incorporators are A. G. Crews, W. W. Davis and E. S. Kickenson of Capron, D. W. Davis of Kiowa, Kan.; Harry E. Mason of Alva.

The Planters' Bank of Goodwater, Ala., has been incorporated at Goodwater, Ala., with \$25,000 capital by C. H. Gilliland, J. S. Fleming, T. P. Cranford, D. T. Rozelle, A. R. Lauderdale, J. S. Gilliland, L. W. Allen and W. H. Moon.

The Bank of Mt. Carmel at Mt. Carmel, S. C., capital \$25,000, has been granted a charter. B. F. Mauldin of Anderson is president, and J. W. Boyd, cashier; directors, B. F. Mauldin, B. A. Boyd, John W. Morrah and T. M. Knox.

The People's Bank & Trust Co. of Hickory Grove, S. C., capital \$10,000, has been incorporated by Charles, L. Cobb, Rufus M. London and C. W. F. Spencer of Rock Hill and W. S. Wilkerson and T. M. Whisnant of Hickory Grove.

The Garza State Bank of Garza, Texas, has filed its charter; capital \$10,000. The incorporators are W. C. Dickman, J. M. Sanders, C. W. Gotcher, J. D. Pinckard, H. P. Swisher, A. B. Brumley, Garza; I. B. Walker, Durant, I. T.

The Delta Bank & Trust Co. will, it is said, begin business at 150 Madison street, Memphis, Tenn., about April 10 with \$100,000 capital. The incorporators are Dr. Heber Jones, E. T. Bennett, B. W. Wray, W. A. Duncan, Jr., and T. M. Scruggs.

A bill has been introduced in the house to incorporate the Suburban Trust & Building Co. of Baltimore, Md.; capital \$25,000. The incorporators are Hugh J. Gallagher, Michael P. Kehoe, Allen K. Wood, Dr. Harry C. Hess and H. C. Shryock.

Articles of incorporation for the First Bank of Haskell, I. T., capital \$25,000, have been filed by J. H. Hill, J. C. Scully, J. W. Ouswell, W. Y. Dilley, M. F. Smith, J. T. Way, R. Brownbridge, J. H. Widell, P. H. Pepperkorn, O. G. Harris and C. H. Chandler.

The Citizens' State Bank of Richardson, Texas, capital \$10,000, has been incorporated by D. E. Waggoner of Dallas, C. H. Blewett, H. C. Jackson, W. A. Watson, B. F. Bowser, R. E. Thompson, C. C. Huffhines and Miss Ella E. Watson, all of Richardson.

The Hammond Building and Loan Association of Hammond, La., capital \$1,000,000, has organized with the following officers: C. E. Cate, president; W. E. Libby, vice-president; F. G. Bueller, secretary-treasurer; W. M. Wright, attorney; J. B. Adams, notary.

The Bradford State Bank of Bradford, Ark., capital \$5000, has begun business with the following directors: W. D.

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Plant, president; H. C. Denson, vice-president, and H. J. Drennen, formerly of Batesville, cashier; C. H. McKnight and S. S. W. Criswell.

The Enterprise Building and Loan Association of Greenville, S. C., capital \$200,000, has been granted a charter. The directors are J. S. Moore, J. S. Muller, John T. Sloan, F. H. Weston, W. M. Gibbs, Jr., Bruce W. Ravenel, R. Beverly Sloan and Julian B. Friday.

The Bank of Norman Park at Norman Park, Ga., capital \$25,000, has been granted a charter. The incorporators are J. B. Norman, Jr., M. D. Norman, R. W. Horne and J. E. Lanier of Norman Park, and Robert L. Shipp and Z. H. Clark of Moultrie, and G. F. Clark of Crossland.

The National Live-Stock Insurance Co. of Fitzgerald, Ga., has been granted a charter. The incorporators are R. A. Smith, D. B. Ware, J. B. Senior, J. M. McDonald, E. W. Stetson, L. O. Tisdell, E. W. Ryman, Marion Dickerson, William R. Bowen, F. J. Clarke, J. B. Clements and J. C. Boney.

[For Additional Financial News, See Pages 38 and 39.]



